ARCHAEOLOGICAL SURVEY OF A PORTION OF THE DILLON ROAD PATHWAY, HILTON HEAD ISLAND, BEAUFORT COUNTY, SOUTH CAROLINA

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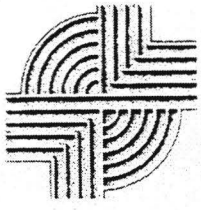
CHICORA RESEARCH CONTRIBUTION 331



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June 7, 2001

This report is printed on permanent paper ∞

ABSTRACT

This study reports on an archaeological survey of approximately 0.83 mile of the 2.8 miles bike pathway being proposed by the Town of Hilton Head Island. The study was conducted to assist the Town comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800.

The tract is to be used for construction of a 10-foot wide bike path with a right-of-way of approximately 14 feet (although the construction limits may be somewhat more). Chicora was contacted after the S.C. Department of Archives and History informed Mr. Bud Culbertson of the Town of Hilton Head, about site 38BU805, a prehistoric and historic National Register Site, which was located in the area surrounding a portion of the bike path. The bike path area in the vicinity of this National Register site was recommended for survey. Chicora Foundation concurred with the recommendation, but also pointed out to the Town that the pathway would affect site 38BU806, which had been previously determined eligible for inclusion on the National Register.

Consequently, the Town requested that the area beginning at Baker Field — the site of 6 tabby chimney remains identified as 38BU806 — and continue just past the Freedmen's village of Mitchelville — 38BU805, which is on the National Register. Only this 0.83 mile section of the entire pathway is included in this survey.

The corridor stays level at about 10 feet AMSL, except for two drainages or sloughs, and is located in the grassy areas of residential or commercial yards or in light wooded areas. The survey stayed about 20 feet off the road, but remained parallel with the road, starting at Barker Field on Bay Gall Road, heading southwest, then turning southeast on Fish Haul Road. Fish Haul Road changes into Dillon Road after crossing Beach City Road. The survey continued to Wiley Lane.

A bike path is constructed in the same general manner as a road, just on a smaller scale. The corridor is cleared, grubbed, and graded. Unsuitable soil is removed and all subsoil is compacted. A base coat, followed by asphalt is then installed. Associated with the project are areas of utility and drainage construction. All of this work has the potential to affect historic and archaeological sites in the area.

Because the proposed pathway is immediately adjacent to an existing roadway, we examined only historic structures which were immediately adjacent to the proposed construction.

Consultation with the S.C. Department of Archives and History revealed no other historical properties in the APE and an investigation of the archaeological site files at the S.C. Institute of Archaeology and Anthropology identified no other archaeological sites in the corridor besides 38BU805 and 38BU806.

The archaeological survey of the tract incorporated shovel testing at 20-foot intervals on a single transect line running down the approximate centerline of the proposed pathway. All shovel test fill was screened through ¼-inch mesh and the shovel tests were backfilled at the completion of the study. A total of 220 shovel tests were excavated along the transect line. As a result of these investigations, two new sites were uncovered, 38BU1931 and 38BU1932. In addition, materials clearly associated with both 38BU805 and 38BU806 were also encountered.

The boundaries for 38BU805 (Mitchelville) were demonstrated to extend to Dillon Road (confirming the National Register boundaries which were based on historic research). The remains found during this investigation suggest that additional,

significant site materials may be destroyed by the proposed pathway. We recommend that initially a series of four 5-foot units be excavated in the corridor, followed by mechanical stripping to search for features.

In addition, the boundaries for 38BU806 (Drayton Plantation Slave Row) were also extended to include areas where no tabby chimney remains are still extant. These boundaries were predicted based on earlier work at the site. This is a unique site and the proposed undertaking will have a very significant impact on the site. As a result, we recommend data recovery excavation of 1,100 square feet — representing 10% of the corridor. This, too, should be followed by mechanical stripping to search for near-yard features.

Mitigation at 38BU806 should also include preservation of the tabby chimney footings originally recommended as a result of a federally funded project in 1989, but never undertaken. Since that time there has been very significant loss of the historic fabric and these unique resources are undergoing demolition through neglect. It is essential that steps be taken as a part of this project to ensure the preservation of these features. This will entail securing the site with fencing, removing at least one tree, and using composite conservation repair to replace lost materials, followed by a stucco coat.

Site 38BU1931 is a subsurface nineteenth century domestic site which may be associated with either the slave settlement at 38BU806 or possibly the Mitchelville settlement designated 38BU805. The site is recommended potentially eligible and we recommend the excavation of two 5-foot units in order to collection additional information to allow an eligibility determination. This additional testing may also be adequate to mitigate any impact to the site, should it found eligible.

Site 38BU1932 has both historic and prehistoric components, but the remains are very sparse and it is unlikely that the site can address significant research questions. It is therefore recommended not eligible and no additional management activities are recommended.

It is possible that more archaeological remains may be encountered in the corridor during construction. Construction crews should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office or to Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No construction should take place in the vicinity of these late discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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INTRODUCTION

This intensive archaeological survey of a portion of the Town of Hilton Head's Dillon Road Pathway (a bike path), situated in the northern portion of Hilton Head Island, in the southeastern portion of Beaufort County, South Carolina was conducted by Dr. Michael Trinkley of Chicora Foundation, Inc. for Mr. Bud Culbertson of the Town of Hilton Head in South Carolina. The work was conducted to assist the Town of Hilton Head comply with Section 106 of the National Historic Preservation Act and the regulations codified in 36CFR800 and was conducted under archaeological survey approval number 01003.

The project area is located off S-335 on the northern edge of Hilton Head Island (Figure 1). The project consists of about 0.83 mile of a 2.78 mile corridor starting on Baygall Road by Barker Field, heading southwest, then heading southeast on Fish Haul Road. Fish Haul Road turns into Dillon Road at the junction of Beach City Road, and the surveyed was terminated about 1,400 feet southeast of that intersection (Figure 2).

Topography in the survey area consists of a level tract of land near the Port Royal Sound on the Atlantic Ocean. The tract's vegetation consists of light wooded areas and grassy lawn areas of commercial and residential property. Situated in the northern portion of Hilton Head Island, the area is surrounded by small houses, a few commercial structures, and several trailers.

The tract, as previously mentioned, is intended to be used for construction of a bike path. This pathway will be 10 feet in width, with a minimum of 2 additional feet of shoulder on each side, for a minimum right-of-way of 14 feet (Figure 3). The work will include clearing and grubbing of this right-of-way; throughout much of the corridor this will involve some tree and scrub vegetation removal, with the roots grubbed out to depths of several feet. The plans also require that the soil in some unspecified areas be removed, while all of the subsoil will be compacted to 95% modified proctor density. During this compaction process the subsoil will also be graded to provide for drainage. In some areas there may also be construction of catch basins and some utilities may need to be relocated. Above the compacted subsoil will be 4½-inches of compacted graded aggregate (commonly referred to as crush-run). On this base course will be 1½-inches of asphalt (Figures 4 and 5). The work will cause complete destruction of any archaeological remains which may be present within the right-of-way — necessitating this survey.

Construction of a bike pathway is much like building a road, with the actual construction may cause considerable noise and dust. After the route is built these problems will subside, but the finished pathway may detract from the visual surroundings. However, because the pathway has a very low profile and is consistently adjacent to existing highways, we have only considered architectural sites which may be immediately adjacent to the proposed undertaking.

The study does **not** consider any future secondary impact of the project, including such things as expansion of the bike route. In addition, this project also does **not** consider the portions of the bike path beyond the specific survey limits.

In this context, we should point out that a pathway has previously been constructed along the north side of Beach City Road. While not within the boundaries of the Fish Haul National Register Site, it is immediately across the road and certainly within the historical limits of the site. We recommend that the Town of Hilton Head take more thorough precautions to ensure that significant cultural resources are not damaged or destroyed by these projects.

We were requested by Mr. Bud Culbertson of the Town of Hilton Head to provide a proposal for the survey of this corridor in May and we submitted a proposal for the survey of the pathway. Authorization to conduct a survey was provided shortly thereafter.

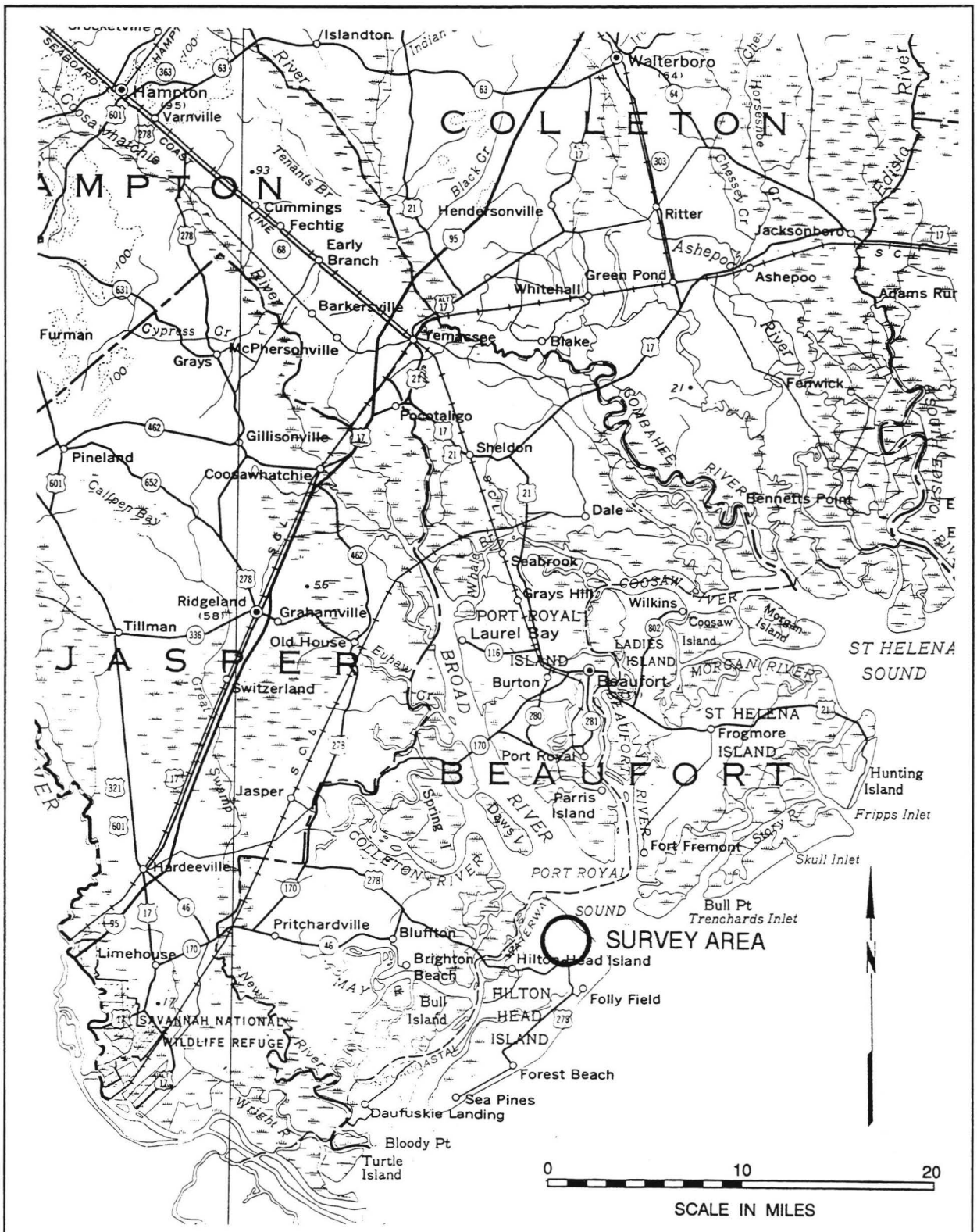

Figure 1. Project vicinity in Beaufort County (basemap is USGS South Carolina 1:500,000).

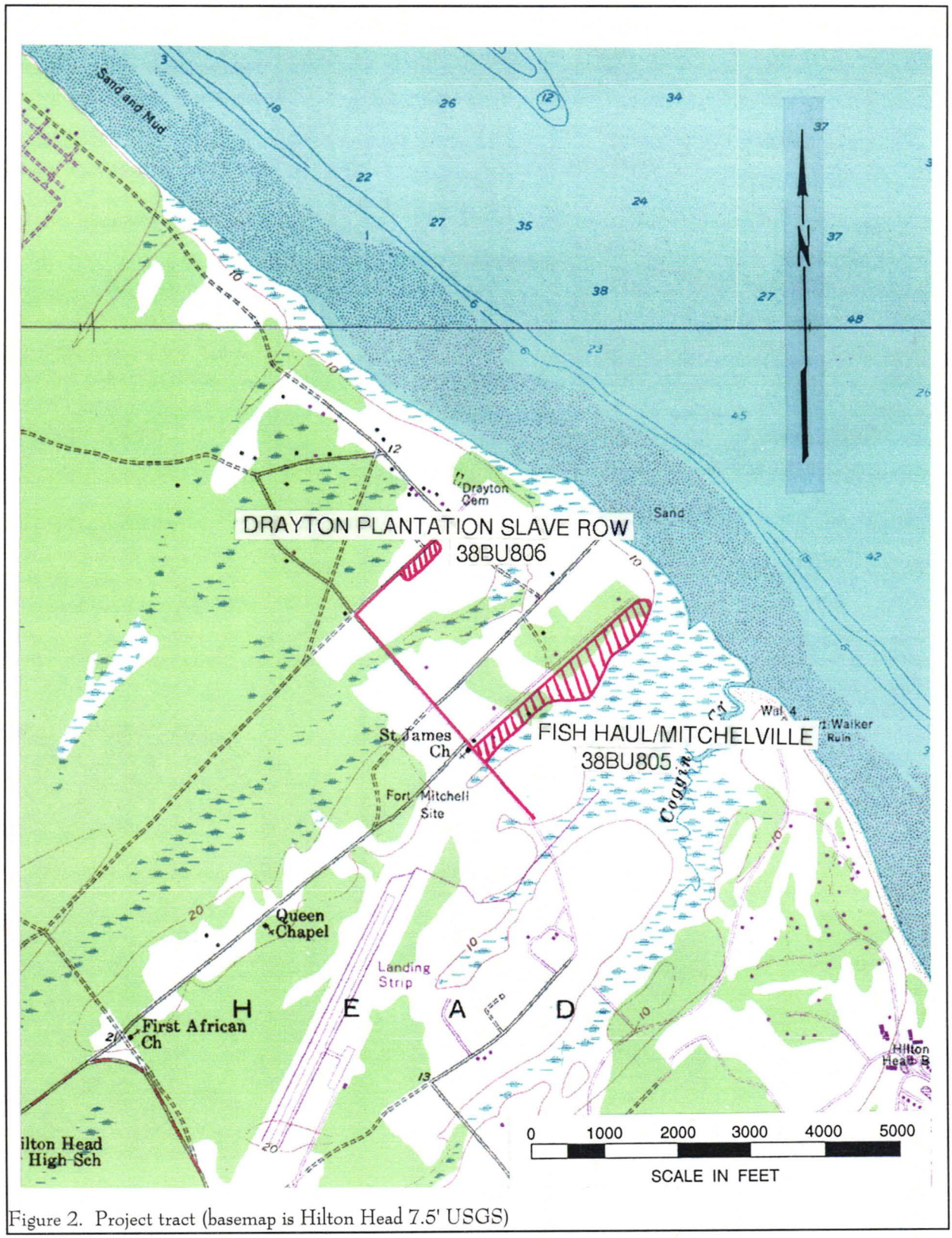

Figure 2. Project tract (basemap is Hilton Head 7.5' USGS)

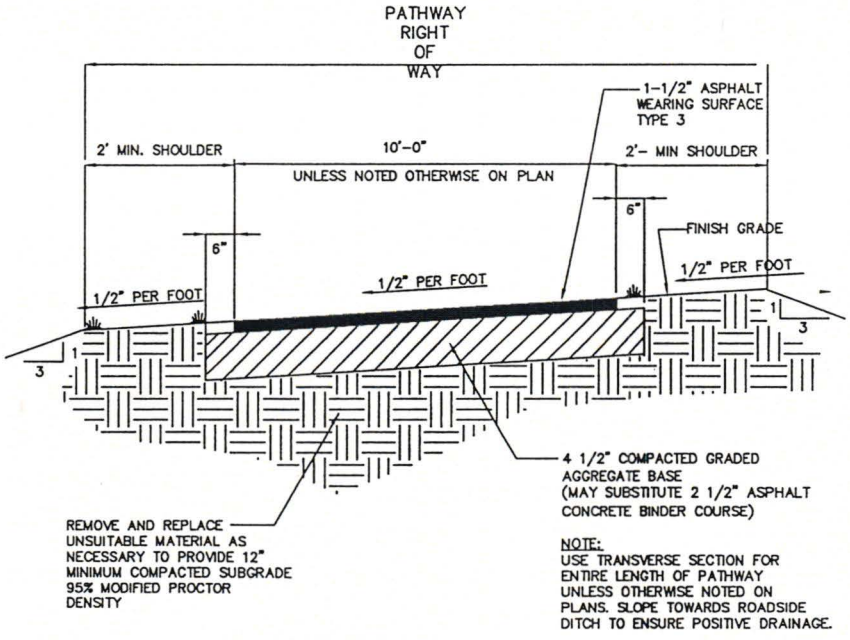

Figure 3. Typical transverse section of the proposed pathway (not to scale).

A review of the site files at the South Carolina Institute of Archaeology and Anthropology revealed two archaeological sites in pathway corridor: 38BU805, or the Fish Haul/Mitchelville Site and 38BU806, the Drayton Plantation slave row. As discussed in greater detail in a following section of this report, the Fish Haul/Mitchelville site was listed on the National Register of Historic Places in 1988 and consists of both a significant Late Archaic Stallings Phase assemblage, as well as intact remains of a very large and important freedman's village, occupied from about 1862 through the early twentieth century. The Drayton slave settlement, in contrast, represents a well documented nineteenth slave village which has been previously determined eligible for inclusion on the National Register by the State Historic Preservation Office.

Examination of the South Carolina Department of Archives and History GIS yielded no known architectural structures within the APE, although the island has never received a comprehensive survey (primarily because of its recent and very intensive development).

Archival and historical research was limited to a review of secondary sources available in the Chicora Foundation files. These, specifically, included Chicora's previous investigations at both sites (Trinkley 1986; Trinkley

Figure 4. Example of a pathway under construction, showing the clearing and grubbing within the right-of-way and placement of the crush-run base.

Figure 5. Completed pathway on the north side of Beach City Road, showing what the project will look like when completed.

1989).

The archaeological survey was conducted on May 29-30, 2001 by Dr. Michael Trinkley, Mr. Tom Covington, and Ms. Nicole Southerland. The survey revealed two previously unrecorded archaeological sites (38BU1931 and 38BU1932), one isolated find (38BU000), and the two previously recorded sites (Fish Haul/Mitchelville and Drayton's Slave Row).

Report production and artifact analysis was conducted at Chicora's laboratories in Columbia, South Carolina from June 1-5.

NATURAL ENVIRONMENT

Physiography

Beaufort County is located in the lower Atlantic Coastal Plain of South Carolina and is bounded to the south and southeast by the Atlantic Ocean, to the east by St. Helena Sound, to the north and northeast by the Combahee River, to the west by Jasper and Colleton counties, and portions of the New and Broad rivers. The mainland primarily consists of nearly level lowlands and low ridges. Elevations range from about sea level to slightly over 100 feet above mean sea level (AMSL) (Mathews et al. 1980:134-135).

Hilton Head is a sea island located between Port Royal Sound to the north and Daufuskie Island to the south. The island is separated from Daufuskie by Calibogue Sound and from the mainland by a narrow band of tidal marsh and Skull Creek. Between Hilton Head Island and the mainland are several smaller islands, including Pinckney and Jenkins islands. Hilton Head is about 11.5 miles in length and has a maximum width of 6.8 miles, yielding 19,460 acres of highland and 2400 acres of marsh.

Hilton Head is situated in the Sea Island section of South Carolina's Coastal Plain province. The coastal plain consists of the unconsolidated sands, clays, and soft limestones found from the fall line eastward to the Atlantic Ocean, an area of more than 20,000 square miles or about two-thirds of the State (Cooke 1936:1-3). Elevations range from just above sea level on the coast and up to 21 feet at the top of the highest beach ridges on the island, to about 600 feet mean sea level (MSL) adjacent to the Piedmont province. The coastal plain is drained by three large through-flowing rivers — the Pee Dee, Santee, and Savannah — as well as by numerous smaller rivers and streams. On Hilton Head Island, there are two major drainages, Broad Creek which flows almost due west into Calibogue Sound, and Jarvis Creek which empties into Mackay Creek just north of Broad Creek.

From Bull Bay southward, the coast is atypical of the northern coastline. The area is characterized by low-lying, sandy islands bordered by salt marsh. Brown (1975) classes these islands as either Beach Ridge or Transgressive, with the Transgressive barrier islands being straight, thin pockets of sand which are rapidly retreating landward with erosion rates of up to 1600 feet since 1939. The Beach Ridge barrier islands, however, are more common and consist of islands such as Kiawah and Hilton Head. They are characterized by a bulbous updrift (or northern) end.

Kana (1984) discusses the coastal processes which result in the formation of barrier islands, noting that the barrier island system includes tidal inlets at each end of the barrier with the central part of the island tending to be arcuate in shape while the ends of the island tend to be broken. Hilton Head has the typical central bulge caused by sand wrapping around the tidal delta and then depositing midway down the island. Further, the south end has an accreting spit where sand is building out the shoreline. The central part of the island, however, has experienced a 25-year erosion trend averaging 3 to 10 feet (0.9 to 3 meters) a year (Kana 1984:11-12; see also U.S. Army Corps of Engineers 1971). More recent work by Kana et al. (1986) reaffirms considerable shoreline reorientation.

Hilton Head Island, however, is also a different shape than most of the other islands since it has a Pleistocene core with a Holocene beach ridge fringe. To understand fully the significance of this situation, it is important to realize that technically the sea islands and the barrier islands are different from a historical perspective. The classic sea islands of colonial and antebellum fame (such as James, St. Helena, and Sapelo islands) are erosional remnants of coastal sand bodies deposited during the Pleistocene high sea level stands. They are crudely elongate, parallel to the present day shoreline, and rectangular in outline. Their topography is characterized by gentle slopes, and poorly defined ridges and swales. Maximum elevations typically

range from 5 to 35 feet (1.5 to 10.7 meters) MSL. Typical barrier islands include Pawleys, Kiawah, and Hunting islands. There are, in addition, marsh islands, such as Morris and St. Phillips islands, composed of isolated or widely spaced Holocene sand ridges surrounded by Holocene salt marsh (Mathews et al. 1980).

Some islands, such as Hilton Head, Daufuskie, and St. Catherines, however, have an oceanward fringe of beach dune ridges which were constructed during the Holocene high sea level stands (Mathews et al. 1980:65-71; Ziegler 1959). Ziegler (1959:Figure 6) suggests that Hilton Head Island is composed of several sea or erosion remnant islands, joined together by recent Holocene deposits.

Climate

In the early nineteenth century the Beaufort climate was described as "one of the healthiest" (Mills 1826:377), although Thomas Chaplin's antebellum journal describing life at nearby Tombee Plantation on St. Helena Island presents an entirely different picture (Rosengarten 1987). In 1864 Charlotte Forten wrote that "yellow fever prevailed to an alarming extent, and that, indeed the manufacture of coffins was the only business that was at all flourishing (Forten 1864:588). Even a cursory review of death certificates for the 1920s reveals that the low country was still a foreboding place. Brights disease, tuberculosis, typhoid fever, and malaria were all more common causes of death than "old age."

The major climatic controls of the area are latitude, elevation, distance from the ocean, and location with respect to the average tracks of migratory cyclones. The project's latitude of about 32°20'N places it on the edge of the balmy subtropical climate typical of Florida. As a result, there are relatively short, mild winters and long, warm, humid summers. The large amount of nearby warm ocean water surface produces a maritime climate, which tends to moderate both the cold and hot weather. The Appalachian Mountains, about 220 miles to the northwest, block shallow cold air masses from the northwest, moderating them before they reach the sea islands (Landers 1970:2-3; Mathews et al. 1980:46).

Maximum daily temperatures in the summer tend to be near or above 90°F and the minimum daily temperatures tend to be about 68°F. The summer water temperatures average 83°F. The abundant supply of warm, moist and relatively unstable air produces frequent scattered shatters and thunderstorms in the summer. Winter has average daily maximum and minimum temperatures of 63°F and 38°F respectively. Precipitation is in the form of rain associated with fronts and cyclones; snow is uncommon (Janiskee and Bell 1980:1-2).

The average yearly precipitation is 49.4 inches, with 34 inches occurring from April through October, the growing season for most low country crops. Hilton Head Island has approximately 285 frost free days annually (Janiskee and Bell 1980:1; Landers 1970). This mild climate, as Hilliard (1984:13) notes, is largely responsible for the presence of many southern crops, such as cotton and sugar cane.

While the temperatures on the Sea Islands are not extreme, the relative humidity is frequently high enough to produce muggy conditions in the summer and dank conditions in the winter. Relative humidity ranges from about 63-89% in the summer to 58-83% in the winter. The highest relative humidity occurs in the morning and as the temperature increases, the humidity tends to decline (Landers 1970:11; Mathews et al. 1980:46).

The coastal area is at a moderately high risk of tropical storms, with 169 hurricanes being documented from 1686 through 1972 (Mathews et al. 1980:56). The last Category 5 hurricane which hit this area was the August 27, 1893 storm which had winds of 120 miles per hour and a storm surge of 17 to 19.5 feet. Over 1,000 people in South Carolina were reported killed by this storm (Mathews et al. 1980:55). Other notable historic storms have occurred in 1700, 1752, 1804, 1813, and 1885.

Geology and Soils

The coastal region is covered in sands and clays originally derived from the Appalachian Mountains and which are organized into coastal, fluvial, and aeolian deposits. These were transported to the coast during the

Quaternary period and were deposited on bedrock of the Mesozoic Era and Tertiary period. These sedimentary bedrock formations are only occasionally exposed on the coast, although they frequently outcrop along the fall line (Mathews et al. 1980:2). The bedrock in the Beaufort area is below a level of 1640 feet (Smith 1933:21).

The Pleistocene sediments are organized into topographically distinct, but lithologically similar terraces parallel to the coast. These terraces have elevations ranging from 215 feet down to sea level. The terraces, representing previous sea floors, were apparently formed at high stands of the fluctuating, though falling, Atlantic Ocean and consist chiefly of sand and clay (Cooke 1936). More recently, research by Colquhoun (1969) has refined the theory of formation processes, suggesting a more complex origin involving both erosional and depositional processes operating during marine transgressions and regression.

The mainland soils are Pleistocene in age and tend to have more distinct horizon development and diversity than the younger soils of the Sea Islands. Sandy to loamy soils predominate in the level to gently sloping mainland areas. The island soils are less diverse and less well developed, frequently lacking a well-defined B horizon. Organic matter is low and the soils tend to be acidic. The Holocene deposits typical of barrier islands and found as a fringe on some sea islands, consist almost entirely of quartz sand which exhibits little organic matter. Tidal marsh soils are Holocene in age and consist of fine sands, clay, and organic matter deposited over older Pleistocene sands. The soils are frequently covered by up to 2 feet of salt water during high tide. These organic soils usually have two distinct layers. The top few inches are subject to aeration as well as leaching and therefore are a dark brown color. The lower levels, however, consist of reduced compounds resulting from decomposition of organic compounds and are black. The pH of these marsh soils is neutral to slightly alkaline (Mathews et al. 1980:39-44).

Most of Hilton Head is dominated by the broad soil series of Wando-Seabrook-Seewee soils. These soils can range from moderately well drained to somewhat poorly drained soils that are sandy throughout (Stuck 1980). The survey track, however, is dominated by four soil types with two, Wando and Seabrook, being well drained. The other two, Ridgeland and Rosedhu soils, are found in lower and wetter areas.

Wando and Ridgeland fine sands are the dominating soil series for the pathway. Wando fine sands have an Ap horizon of dark brown (10YR4/3) fine sand to 0.8 foot over a C1 horizon of brown (10YR5/3) fine sand to a depth of 1.6 feet. The A horizon for Wando soils can range in thickness from 0.4 foot to 1.0 foot and its color can be a dark brown, dark grayish brown or brown. Ridgeland fine sands have an Ap horizon of very dark gray (10YR3/1) fine sand to 0.7 foot of a Bh horizon of dark reddish brown (5YR3/2) fine sand to 1.3 feet. The A2 horizon is a very pale brown (10YR7/4) fine sand which can occur to a depth of almost 3.0 feet.

Also found along the survey tract are Rosedhu soils. These soils have an A1 horizon of black (10YR2/1) fine sand to just under a foot over a B21h horizon of dark reddish brown (5YR3/2) fine sand to 1.4 feet. This layer may occur over a dark brown layer of dark brown (7.5YR4/2) fine sand to a depth of just over 2.0 feet.

Seabrook sands are found least abundantly with only a small portion found toward the beginning of the survey corridor, in the vicinity of Drayton's Slave Settlement. These soils have an Ap horizon of dark grayish brown (10YR4/2) fine sand to 0.8 foot over a C1 horizon of light yellowish brown (10YR6/4) fine sand to a depth of 2.3 feet.

Floristics

Hilton Head Island today exhibits four major ecosystems: the coastal marine ecosystem where land has unobstructed access to ocean, the maritime ecosystem which consists of the upland forest area of the island, the estuarine ecosystem of deep water tidal habitats, and the palustrine ecosystem which consists of essentially fresh water, non-tidal wetlands (Sandifer et al. 1980:7-9).

Mathews et al. (1980:155) note that the most significant ecosystem on Hilton Head Island is the maritime forest community, which is where the survey

area is located. This maritime ecosystem is defined most simply as all upland areas located on barrier islands, limited on the ocean side by tidal marshes. On sea islands the distinction between the maritime forest community and an upland ecosystem (essentially found on the mainland) becomes blurred. Sandifer et al. (1980:108-109) define four subsystems, including the sand spits and bars, dunes, transition shrub, and maritime forest. Of these, only the maritime forest subsystem is likely to have been significant to either the prehistoric or historic occupants. While this subsystem is frequently characterized by the dominance of live oak and the presence of salt spray, these are less noticeable on the sea islands than they are on the narrower barrier islands (Sandifer et al. 1980:120).

The barrier islands may contain communities of oak-pine, oak-palmetto-pine, oak-magnolia, palmetto, or low oak woods. The sea islands, being more mesic or xeric, tend to evidence old field communities, pine-mixed hardwoods communities, pine forest communities, or mixed hardwood communities (Sandifer et al. 1980:120-121, 437).

Originally the entire tract was likely dominated by mixed hardwoods, particularly live oak and palmetto on the higher soils. These areas would likely have been very similar to maritime forests. On the lower, inland soils there were likely areas of what today are called "Florida Scrub" — pine flatwoods which often have slight depressions and ridges characterized by a dense woody pocosin understory. There would also have been some limited areas of wetland swamps with tupelo, bay, and ash.

Several areas of Hilton Head evidence upland mesic hardwoods, also known as "oak-hickory forests" (Braun 1950). These forests contain significant quantities of mockernut hickory as well as pignut hickory, both economically significant to the aboriginal inhabitants. Other areas are more likely to be classified as Braun's (1950:284-289) pine or pine-oak forest communities. Wenger (1968) notes that the presence of loblolly and shortleaf pines is common on coastal plain sites where they are a significant sub-climax aspect of the plan succession toward a hardwood climax. Longleaf pine forests were likewise a common sight (Croker 1979).

Robert Mills, discussing Beaufort District in the early nineteenth century, stated:

> besides a fine growth of pine, we have the cypress, red cedar, and live oak . . . white oak, red oak, and several other oaks, hickory, plum, palmetto, magnolia, poplar, beech, birch, ash, dogwood, black mulberry, etc. Of fruit trees we have the orange, sweet and sour, peach, nectarine, fig, cherry (Mills 1826:377).

He also cautioned, however, that "some parts of the district are beginning already to experience a want of timber, even for common purposes" (Mills 1826:383) and suggested that at least 25% of a plantation's acreage should be reserved for woods.

Although much modified by extensive agriculture, at least some of this more native vegetation is still suggested. There are areas of standing water swamp, as well as remnant areas of maritime forest.

A mid-nineteenth century map shows areas of the island as "cultivated," "old fields," "swamp ground," "thick woods Pine tree and live oak," "pines, live oaks and few other kind," and "very thick woods" (National Archives RG77, Map I52), giving a clear impression of the diversity caused by over a century of intensive agriculture. Trees mentioned on the map show the mingling of needle evergreen and broadleaf evergreen species. Pine was apparently a common species. A description of the island, based on a visit from March through May 1863, states,

> [t]he characteristic trees are the live oak . . . . Besides these, are the pine, the red and white oak, the cedar, the bay, the gum, the maple, and the ash. The soil is luxuriant with an undergrowth of impenetrable vines (Anonymous 1863:294-295).

This and other accounts (Eldridge 1893:69) suggest that the vegetation on Hilton Head was already intensively affected by farming and logging as early as the nineteenth century.

Figure 6. Portion of the survey corridor north and south of Beach City Road, looking north

Much of the corridor exhibits dense mixed hardwood and pine vegetation, although there are areas where the lowland forest is more open. Also present are many areas where the vegetation has been altered by commercial or residential construction.

PREHISTORIC AND HISTORIC BACKGROUND

Previous Research

Although a number of projects have been conducted on Hilton Head Island, one of the first, and most detailed, investigations of African American freedmen was conducted at the Mitchelville site (38BU805) in 1986 by Chicora. Mitchelville is a freedmen's village established after Hilton Head fell to Union troops in 1861. The investigation, funded by the Hilton Head Museum through a donation by the property owner, provided thorough documentation of the black population on Hilton Head in the late nineteenth century.

Another survey conducted by Chicora investigated the Drayton Fish Hall Plantation slave row (38BU806). This survey, performed in 1989, was not as detailed as the Mitchelville study, still provided important information on this coastal slave site of the nineteenth century.

The boundaries of both sites, and the general area of the project corridor are shown in Figure 2.

Mitchelville /Fish Haul (38BU805)

The archaeological investigation for the Fish Haul Site was performed in 1986 and identified both historic and prehistoric components. Excavation of more than 4,000 square feet produced over 25,000 artifacts along with several structures and features associated with the freedmen's village.

Of the structures and features, there was one possible pier and wall trench, a structure with a tabby wattle and daub chimney, a trench of unknown function, a trash pit, a brick chimney base, and the remains of a brick chimney.

It has been suggested that Mitchelville may be one of the most significant African-American archaeological sites in South Carolina (Trinkley 1986). Streets were laid out with houses constructed along the streets and there was an elected town government which controlled sanitary, police, and school standards. Occupants of Mitchelville were supported by wage labor that they might spend in the stores and shops primarily in the Mitchelville vicinity. Other public buildings, such as schools and churches, were also established. The town flourished until about 1880 when transformations in the community finally led to division of the land by 1921.

The artifacts discovered at Mitchelville show that freedmen owned goods in excess of those typical of slavery (Trinkley 1986). Blacks at this time were beginning to prosper after slavery and with this a hierarchy of status was developing.

Although less represented in the survey area, the prehistoric artifacts still contribute data to several research questions and further research will be able to answer even more questions. A total of 3,541 prehistoric sherds were recovered, with Stallings phase pottery representing over 80% of the finds. Also recovered were Thom's Creek, Refuge, Deptford, Mount Pleasant, St. Catherines, and Irene series. Recovered lithics included 29 projectile points or point fragments, representing primarily Savannah River points, 10 large stone tools (hammerstones or other modified rocks), and a total of 610 flakes or small tool fragments.

A study into the ethnobotanical remains on the site suggest a seasonal or short-term occupations by mobile bands (Trinkley 1986). Hickory nuts were found in large numbers within excavation units which may suggest a late fall to early winter gathering season. Clams were also utilized during this time of year. Other types of animals such as fish and deer suggest that this area was occupied during other seasons as well.

One structure, evidenced by post holes in the soil, suggest that the Stallings occupants did have shelter, but since it was the only structure found, the

site was probably not a permanent habitation. Moreoever, these small structures are consistent with the idea of a seasonal occupation. The number of larger artifacts found, could even suggest that Fish Haul was used as a trading facility, where several bands may come together for a short time to barter or this was just an ideal location for subsistence.

Although more research into the prehistoric aspect of the island needs to be conducted, the Fish Haul Site has contributed greatly to the understanding of the Stallings phase of prehistory. Site 38BU805, including both components, was placed on the National Register of Historic Places in June 1988.

Drayton Fish Hall Plantation Slave Row (38BU806)

A survey of this site was conducted in 1989 for the Beaufort County Recreation Commission in order to expand Barker Field, a recreational playing field. During this survey a total of 64 shovel tests were conducted in the existing playing field area and along the road (now known as Baygall Road) into the area of expansion.

The area was once occupied by the slaves of Drayton's Fish Hall Plantation. With the main crop of cotton, Fish Hall Plantation represents the lifestyle of a wealthy owner and his slaves. This is one of the best preserved plantations on the island, and since little information is known about slave life, the artifacts uncovered here help to explain more about that way of life.

Along with the individual shovel tests, a surface survey was conducted along the proposed access road and three 5 foot units were excavated near the above ground tabby chimney structures to collect information on site integrity.

A total of 139 artifacts were recovered in the shovel tests near the tabby chimneys, representing kitchen items such as glass and ceramics, architectural items such as nails, tobacco related artifacts such as pipe stems, and activity artifacts such as miscellaneous hardware items. The artifact pattern for the site most closely resembles that of the Georgia Slave Artifact Pattern, likely reflecting the late antebellum occupation.The three 5 foot squares produced 1,178 historic artifacts with a mean ceramic date of 1846 (Trinkley 1989:36). Based on the limited historical research availble, it was thought that the slave settlement was constructed at least by the 1840s and was abandoned in the early 1870s.

Through the architectural evaluation of the tabby chimneys and the artifact analysis, it was decided that the site was unique and should be preserved. The site was determined eligible for the National Register of Historic Places in 1989. Further research and surveys may help to explain more about the lifestyle of the slaves and their relationship to the plantation way of life.

Prehistoric Synthesis

There have been a number of studies prepared for the Beaufort area, and Derting et al. (1991:47-77) list 225 in their bibliography of South Carolina archaeology. There are a variety of excellent archaeological studies for the general project area which should be consulted (see especially Trinkley and Adams [1994] for an overview of previous research and Anderson et al. [1996] for a synthesis of current thought regarding the Woodland Period along the Carolina coast). Figure 7 shows the generalized cultural periods for the project area.

Paleoindian and Archaic Periods

The Paleoindian period, lasting from 12,000 to 8,000 B.C., is evidenced by basally thinned, side-notched projectile points; fluted, lanceolate projectile points; side scrapers; end scrapers; and drills (Coe 1964; Goodyear et al. 1989; Michie 1977; Williams 1968). The Paleoindian occupation, while widespread, does not appear to have been intensive. Artifacts are most frequently found along major river drainages, which Michie interprets to support the concept of an economy "oriented towards the exploitation of now extinct mega-fauna" (Michie 1977:124).

Sea level during much of this period is expected to have been as much as 65 feet lower than present, so many sites may be inundated (Flint 1971).

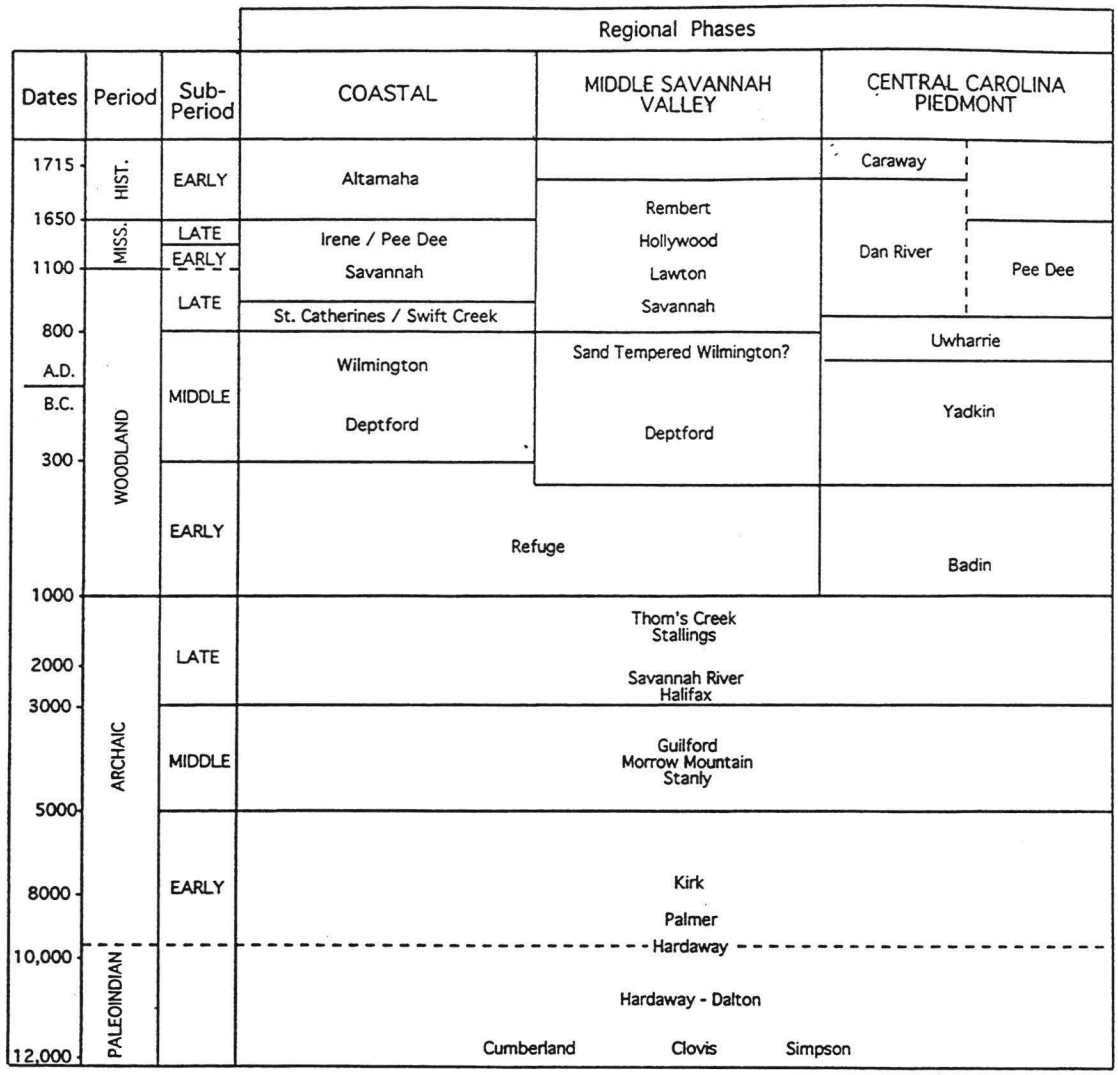

Figure 7. A generalized cultural sequence for South Carolina.

Unfortunately, little is known about Paleoindian subsistence strategies, settlement systems, or social organization. Generally archaeologists agree that the Paleoindian groups were at a band level of society, were nomadic, and were both hunters and foragers. While population density, based on the isolated finds, is thought to have been low, Walthall suggests that toward the end of the period, "there was an increase in population density and in territoriality and that a number of new resource areas were beginning to be exploited" (Walthall 1980:30).

The Archaic period, which dates from 8000 to 2000 B.C., does not form a sharp break with the Paleoindian period, but is a slow transition characterized by a modern climate and an increase in the diversity of material culture. The chronology established by Coe (1964) for the North Carolina Piedmont may be applied with little modification to the South Carolina coast. Archaic period assemblages are

rare in the Sea Island region, although the sea level is anticipated to have been within 13 feet of its present stand by the beginning of the succeeding Woodland period (Lepionka et al. 1983:10). Brooks and Scurry note that:

> Archaic period sites, when contrasted with the subsequent Woodland period, are typically small, relatively few in number and contain low densities of archaeological material. The data may indicate that the interriverine zone was utilized by Archaic populations characterized by small group size, high mobility, and wide ranging exploitative patterns (Brooks and Scurry 1978:44).

Alternatively, the general sparsity of Archaic sites in the coastal zone may be the result of a more attractive environment inland adjacent to the floodplain swamps of major drainages. Of course, this is not necessarily an alternative explanation, since coastal Archaic sites may represent only a small segment in the total settlement system.

Early Woodland

The earliest phase of the Woodland period is called Stallings, after the type site excavated by the Cosgroves in 1929 (Claflin 1931). These "Stallings Island people" produced a rich cultural assemblage of bone and antler work, polished stone items, grooved and perforated "net sinkers" or steatite disks, stone tools (including projectile points, knives, scrapers, and cruciform drills), and fiber tempered pottery (see also Williams 1968). It was over a decade before the typological significance of the Stallings ware was recognized and a formal type description was offered (Fairbanks 1942; Griffin 1943). The definitive feature of this pottery is its large quantity of fiber, now identified as Spanish Moss (Simpkins and Scoville 1981), included in the paste prior to firing.

The elaborate Savannah River drainage sites such as Stallings Island, Fennel Hill, Rabbit Mount, and Bilbo, are all characterized by large quantities of either fresh water mussels or tidal oysters, large quantities of artifacts, and abundant features. These middens, however, represent only one aspect of the Stallings settlement system. Another portion of that system is represented by Stallings sites which evidence little shell. While many of these are sparse scatters, such as Clear Mount (Stoltman 1974) and Pinckney Island (Trinkley 1981b), some evidence intensive occupation with features and a rich cultural assemblage, such as the Love (38AL10; Trinkley 1974) and Fish Haul (38BU805; Trinkley 1986) sites.

At the Fish Haul site a Stallings phase "D"-shaped structure containing about 90 square feet of floor area has been identified (Trinkley 1986:145-147) and Stoltman (1974:51-54) recovered a lean-to structure at Rabbit Mount. The function of essentially non-shell midden sites such as Love and Fish Haul is only partially understood at present, although shellfish seasonality and ethnobotanical studies (Claassen 1986; Lawrence 1986; Trinkley 1986) are beginning to suggest late fall and winter occupation. These may represent early sites when the subsistence base was diffuse, prior to intensive riverine and estuarine exploitation. Alternatively, and more likely, they may represent a seasonal round in the Stallings settlement system. Riverine shellfish may have been gathered in the fall when the Savannah River and its tributaries were low and clear, while other resources away from the river were exploited during the period of high discharge in the late winter and spring (Anderson and Schuldenrein 1985:13). Additional work within the Savannah drainage is necessary to understand more fully the relationship between large shell middens, dense non-shell upland and coastal sites, and sparse upland and coastal "scatters."

The following Thom's Creek phase dates as early as 2220±350 B.C. (UGA-584) from Spanish Mount in Charleston County (Sutherland 1974) and continues to at least 935±175 B.C. (UGA-2901), based on a date from the Lighthouse Point Shell Ring, also in Charleston County (Trinkley 1980b:191-192). The Thom's Creek phase is characterized by an artifact assemblage almost identical to that of Stallings sites. The only major differences include the replacement of fiber tempering with sand, or a clay not requiring tempering, and the gradual reduction of projectile point size.

Thom's Creek pottery, first typed by Griffin (1945), consists of sandy paste pottery decorated with the motifs common to the Stallings series, including punctations (reed and shell), finger pinching, simple stamping, incising, and very late in the phase, finger smoothed (Trinkley 1980a). Investigations at the Lighthouse Point and Stratton Place shell rings, stratigraphic studies at Spanish Mount and Fig Island, radiocarbon dates from Lighthouse Point and Venning Creek, and the study of surface collections from a number of sites, have suggested a temporal ordering of the Thom's Creek series. Reed punctated pottery appears to be the oldest, followed by the shell punctated and finger pinched motifs. Late in the Thom's Creek phase, perhaps by 1000 B.C., there is the addition of Thom's Creek Finger Smoothed (Trinkley 1983a:44). Vessel forms include deep, straight sided jars and shallow conoidal bowls. Lip treatments are simple, and coiling fractures are common. Firing of the Thom's Creek vessels is certainly better than that evidenced for Stallings, but there continues to be abundant incompletely oxidized specimens.

Like the Stallings settlement pattern, Thom's Creek sites are found in a variety of environmental zones and take on several forms. Thom's Creek sites are found throughout the South Carolina Coastal Zone, Coastal Plain, and up to the Fall Line. The sites are found into the North Carolina Coastal Plain, but do not appear to extend southward into Georgia. There appears to be strong concentration of Thom's Creek sites in the Santee River drainage and the central South Carolina coast (see Anderson 1975:184).

In the Coastal Plain drainage of the Savannah River there is a change of settlement, and probably subsistence, away from the riverine focus found in the Stallings Phase (Hanson 1982:13; Stoltman 1974:235-236). Thom's Creek sites are more commonly found in the upland areas and lack evidence of intensive shellfish collection. In the Coastal Zone large, irregular shell middens; small middens with only sparse shell; and large "shell rings" are found in the Thom's Creek settlement system.

Limited testing has been conducted at one small Thom's Creek non-shell midden on Sol Legare Island (38CH779) in Charleston County, South Carolina (Trinkley 1984). The site evidenced very limited reliance on shellfish and faunal remains, with the bulk of the food remains consisting of large mammals. Excavations also identified a portion of a probable Thom's Creek post structure situated about 180 feet inland from the marsh edge.

Excavations at other Coastal Zone Thom's Creek sites includes the work by Sutherland (1973, 1974) at the Spanish Mount shell midden (38CH62). While this work has never been completely published, the site appears to represent a seasonally occupied camp with a diffuse subsistence base, including reliance on shellfish, floral material, fish, and mammals.

By far the most work has been conducted at Thom's Creek phase shell rings (see Trinkley 1980b, 1985). These sites are circular middens about 130 to 300 feet in diameter, 2 to 6 feet in height, and 40 feet in width at their bases, with clear interiors. These doughnut-shaped accumulations were formed as small mounds, arranged around an open ground area, and gradually blended together. The ring itself is composed of varying proportions of shell, animal bone, pottery, soil, and other artifacts. These shell rings were apparently mundane occupation sites for fairly large social units which lived on the ring, disposed of garbage underfoot, and used the clear interiors as areas for communal activities. The sites further suggest relatively permanent, stable village life as early as 1600 B.C., with a subsistence base oriented toward large and small mammals, fish, shellfish, and hickory nut resources (Trinkley 1985).

Following Stallings and Thom's Creek are the Refuge and Deptford phases, both strongly associated with the Georgia sequence and the Savannah drainage (DePratter 1979; Lepionka et al. 1983; Williams 1968). The Refuge Phase, dated from 1070±115 B.C. (QC-784) to 510±100 B.C. (QC-785), is found primarily along the South Carolina coast from the Savannah drainage as far north as the Santee River (Williams 1968:208). Anderson (1975:184) further notes an apparent concentration of Refuge sites in the Coastal Plain, particularly along the Santee River.

The Refuge series pottery is similar in many ways to the preceding Thom's Creek wares. The paste is

compact and sandy or gritty, while surface treatments include sloppy simple stamped, dentate stamped, and random punctate decorations (see DePratter 1979:115-123; Williams 1968:198-208). Anderson et al. note that these typologies are "marred by a lack of reference to the Thom's Creek series" (Anderson et al. 1982:265) and that the Refuge Punctate and Incised types are indistinguishable from Thom's Creek wares. Peterson (1971:153) characterizes Refuge as both a degeneration of the preceding Thom's Creek series and also as a bridge to the succeeding Deptford series.

It is difficult to reconstruct the subsistence base, although the sites suggest small, seasonal camps for small groups (Trinkley 1982). The settlement fragmentation, which began at the end of the Thom's Creek phase, around 1000 B.C., probably relates to the increase in sea level, from a Thom's Creek phase low of 10 feet below the current high marsh surface at 1200 B.C. to a high of about 3 feet below the current high marsh surface at 950 B.C. (Colquhoun et al. 1980; Brooks et al. 1989). This increasing sea level drowned the tidal marshes (and sites) on which the Thom's Creek people relied. The following Refuge phase evidences the fragmentation necessary when the environment which gave rise to large sedentary populations disappeared. Hanson (1982:21-23), based on Savannah River data, suggests that subsistence stress present during the Thom's Creek phase may have resulted in an expansion of the settlement system into diverse environmental settings. It seems likely, however, that the development of mature, upland tributaries was also essential ingredient in this process (see Sassaman et al. 1989). This same "splintering" is observed on the South Carolina coast.

The Deptford culture takes its name from the type site located east of Savannah, Georgia, which was excavated in the mid-1930s (Caldwell 1943:12-16). Deptford phase sites are best recognized by the presence of fine to course sandy paste pottery with a check stamped surface treatment. This pottery is typically in the form of a cylindrical vessel with a conoidal base. The flat bottomed bowl with tetrapodal supports found at Deptford sites along the Florida Gulf coast (Milanich and Fairbanks 1980:79) is very rare in South Carolina. Other Deptford phase pottery styles include cord marking, simple stamping, a complicated stamping which resembles early Swift Creek, and a geometric stamping which consists of a series of carved triangles or diamonds with interior dots (see Anderson et al. 1982:277-293; DePratter 1979).

The Deptford technology is little better known than that of the preceding Refuge phase. Shell tools are uncommon, bone tools are "extremely rare" (Milanich and Fairbanks 1980:77), and stone tools are rare on Coastal Zone sites. All of this indicates to some researchers that "wood must have been worked into a variety of tool types" (Milanich and Fairbanks 1980:75). One type of stone tool associated with South Carolina Deptford sites is a very small, stemmed projectile point tentatively described as "Deptford Stemmed" (Trinkley 1980c:20-23). This point is the culmination of the Savannah River Stemmed reduction seen in the Thom's Creek and Refuge phases. Also found at Deptford sites are "medium-sized triangular points," probably similar to the Yadkin Triangular point (Coe 1964:45, 47, 49; Milanich and Fairbanks 1980:75-76).

Perhaps of even greater interest is the co-occurrence of the larger triangular points (such as Badin and Yadkin) with smaller triangular forms (such as Caraway) traditionally attributed to the Late Woodland and South Appalachian Mississippian periods. This situation has been reported at Coastal Plain sites (Blanton et al. 1986:107), Savannah River sites (Sassaman et al. 1989:157), and Coastal Zone sites (Trinkley 1990). Blanton et al. (1986) suggest that these point types were used at the same time, but perhaps for different tasks.

The traditional view of an estuarine Deptford adaptation with minor interior occupations must be re-evaluated based on the Savannah River drainage work of Brooks and Hanson (1987) and Sassaman et al. (1989:293-295) who suggest larger residential base camps and foraging zones along the Savannah River, coupled with smaller, household residences and foraging zones in the uplands along small tributaries.

Throughout much of the Coastal Zone and Coastal Plain north of Charleston, a somewhat different cultural manifestation is observed, related to the "Northern Tradition" (e.g., Caldwell 1958). This

recently identified assemblage has been termed Deep Creek and was first identified from northern North Carolina sites (Phelps 1983). The Deep Creek assemblage is characterized by pottery with medium to coarse sand inclusions and surface treatments of cord marking, fabric impressing, simple stamping, and net impressing (see Trinkley 1987). Much of this material has been previously designated as the Middle Woodland "Cape Fear" pottery originally typed by South (1960). The Deep Creek wares date from about 1000 B.C. to A.D. 1 in North Carolina, but may date later in South Carolina, based on two radiocarbon dates of 120±130 B.C. (QC-1358) and A.D. 210±110 (QC-1357). The Deep Creek settlement and subsistence systems are poorly known, but appear to be very similar to those identified with the Deptford phase.

The Deep Creek assemblage strongly resembles Deptford both typologically and temporally. It appears this northern tradition of cord and fabric impressions was introduced and gradually accepted by indigenous South Carolina populations. During this time some groups continued making only the older carved paddle-stamped pottery, while others mixed the two styles, and still others (and later all) made exclusively cord and fabric stamped wares.

Middle Woodland

Although the Deptford phase is discussed as part of the Early Woodland, many authors place the phase intermediate between the Early and Middle Woodland (see, for example, Anderson et al. 1982:28, 250). Such an approach is not unreasonable, because Deptford exhibits considerable temporal range and cultural adaptations which are more characteristically Middle Woodland (see also Anderson 1985:53). The Deptford phase, however, is still part of the early carved paddle stamped tradition which is replaced by the posited northern intrusion of wrapped paddle stamping during the Middle Woodland. Clearly the Deep Creek pottery, at the same time period as Deptford, is part of this "Northern Tradition," yet the Deep Creek, on temporal grounds, is considered Early Woodland by Phelps (1983:17, 29). This is meant simply to indicate that the transition from Early to Middle Woodland is not as clear as one might wish.

The Middle Woodland in South Carolina is characterized by a pattern of settlement mobility and short-term occupation. On the southern coast it is associated with the Wilmington phase, while on the northern coast it is recognized by the presence of Hanover, McClellanville or Santee, and Mount Pleasant assemblages. Wilmington and Hanover may be viewed as regional varieties of the same ceramic tradition. The pottery is characterized almost solely by its crushed sherd (perhaps with grog as well) temper which makes up 30 to 40% of the paste and which ranges in size from 3 to 10 mm. Wilmington was first described by Caldwell and Waring (Williams 1968:113-116) from coastal Georgia work, while the Hanover description was offered by South (1960), based on a survey of the Southeastern coast of North Carolina (with incursions into South Carolina). The Wilmington phase was seen by Waring (Williams 1968:221) as intrusive from the Carolina coast, but there is considerable evidence for the inclusion of Deptford traits in the Wilmington series. For example, Caldwell and McCann (1940:n.p.) noted that, "the Wilmington complex proper contains all of the main kinds of decoration which occur in the Deptford complex with the probable exception of Deptford Linear Checkstamped" (see also Anderson et al. 1982:275). Consequently, surface treatments of cord marking, check stamping, simple stamping, and fabric impressing may be found with sherd tempered paste.

Sherd tempered Wilmington and Hanover wares are found from at least the Chowan River in North Carolina southward onto the Georgia coast. Anderson (1975:187) has found the Hanover series evenly distributed over the Coastal Plain of South Carolina, although it appears slightly more abundant north of the Edisto River. The heartland may be along the inner Coastal Plain north of the Cape Fear River in North Carolina. Radiocarbon dates for Wilmington and Hanover range from 135±85 B.C. (UM-1916) from site 38BK134 to A.D. 1120±100 (GX-2284) from a "Wilmington House" at the Charles Towne Landing site, 38CH1. Most dates, however, cluster from A.D. 400 to 900; some researchers prefer a date range of about 200 B.C. to A.D. 500 (Anderson et al. 1982:276).

Largely contemporaneous with the sherd

tempered wares are what have been termed the Mount Pleasant, McClellanville, and Santee series. The Mount Pleasant series has been developed by Phelps from work along the northeastern North Carolina coast (Phelps 1983:32-35, 1984:41-44) and is a Middle Woodland refinement of South's (1960) previous Cape Fear series. The pottery is characterized by a sandy paste either with or without quantities of rounded pebbles. Surface treatments include fabric impressed, cord marked, and net impressed. Vessels are usually conoidal, although simple, hemispherical, and globular bowls are also present. The Mount Pleasant series is found from North Carolina southward to the Savannah River (being evidenced by the "Untyped Series" in Trinkley 1981b). North Carolina dates for the series range from A.D. 265±65 (UGA-1088) to A.D. 890±80 (UGA-3849). The several dates currently available from South Carolina (such as UGA-3512 of A.D. 565±70 from Pinckney Island) fall into this range of about A.D. 200 to 900.

The McClellanville (Trinkley 1981a) and Santee (Anderson et al. 1982:302-308) series are found primarily on the north central coast of South Carolina and are characterized by a fine to medium sandy paste ceramic with surface treatment of primarily v-shaped simple stamping. While the two pottery types are quite similar, it appears that the Santee series may have later features, such as excurvate rims and interior rim stamping, not so-far observed in the McClellanville series. The Santee series is placed at A.D. 800 to 1300 by Anderson et al. (1982:303), while the McClellanville ware may be slightly earlier, perhaps A.D. 500 to 800. Anderson et al. (1982:302-304; see also Anderson 1985) provide a detailed discussion of the Santee Series and its possible relationships with the McClellanville Series. Anderson, based on the Santee area data from Mattassee Lake, indicates that there is evidence for the replacement of fabric impressed pottery by simple stamping about A.D. 800 (David G. Anderson, personal communication 1990). This may suggest that McClellanville and Santee wares are closely related, both typologically and culturally. Also probably related is the little known Camden Series (Stuart 1975) found in the inner Coastal Plain of South Carolina.

The best data concerning Middle Woodland Coastal Zone assemblages comes from Phelps' (1983:32-33) work in North Carolina. Associated items include a small variety of the Roanoke Large Triangular points (Coe 1964:110-111), sandstone abraders, shell pendants, polished stone gorgets, celts, and woven marsh mats. Significantly, both primary inhumations and cremations are known from the Mount Pleasant phase.

These Middle Woodland Coastal Plain and Coastal Zone phases continue the Early Woodland Deptford pattern of mobility. While sites are found all along the coast and inland to the Fall Line, shell midden sites evidence sparse shell and artifacts. Gone are the abundant shell tools, worked bone items, and clay balls. Recent investigations at Coastal Zone sites such as 38BU747 and 38BU1214, however, have provided some evidence of worked bone and shell items at Deptford phase middens (see Trinkley 1990).

In terms of settlement patterns, several researchers have offered some conclusions based on localized data. Michie (1980:80), for example, correlates rising sea levels with the extension of Middle Woodland shell middens further up the Port Royal estuary. Scurry and Brooks (1980:75-78) find the Middle Woodland site patterning in the Wando River affected not only by the sea level fluctuations, but also by soil types (see also Trinkley 1980b:445-446). They suggest that the strong soil correlation is the result of upland sites having functioned as extraction areas, principally for exploitation of acorns, hickory nuts, and deer. Shell midden sites, they suggest, also represent seasonal camps and therefore exhibit small size, low artifact density, and infrequent re-occupation. Ward's (1978) work in Marlboro County suggests that interior site patterning changed little from the Early to Middle Woodland. Sites continue to be found on the low, sandy ridges overlooking hardwood swamp floodplains, which suggests that while pottery styles changed, site locations, and presumably subsistence, did not (see also Ferguson 1976). Drucker and Anthony's (1978) work in Florence County, South Carolina reveals virtually continuous short-term occupation along the terraces associated with the floodplain of Lynch's Lake. DePratter's work at the Dunlap site, however, suggests that a few, relatively stable villages were present in the Middle Woodland.

Late Woodland and South Appalachian Mississippian

In many respects the South Carolina Late Woodland may be characterized as a continuation of previous Middle Woodland cultural assemblages. While outside the Carolinas there were major cultural changes, such as the continued development and elaboration of agriculture, the Carolina groups settled into a lifeway not appreciably different from that observed for the previous 500 to 700 years (cf. Sassaman et al. 1989:14-15). This situation would remain unchanged until the development of the South Appalachian Mississippian complex (see Ferguson 1971).

Along the central and northern South Carolina coast, Anderson et al. (1982:303-304) suggest a continuation of the Santee series into the Late Woodland. The Hanover and Mount Pleasant series may also be found as late of A.D. 1000. Along the southeastern North Carolina coast, South (1960) has defined the Oak Island complex, which is best known for its shell tempered ceramics with cord marked, fabric impressed, simple stamped, and net impressed surface finishes. The phase is briefly discussed by Phelps (1983:48-49), but curiously this manifestation is almost unknown south of the Little River in South Carolina. Very little is known about the northern coastal South Carolina Late Woodland complexes, although sites such as 38GE32 may document the occurrence of village life in the Late Woodland.

The South Appalachian Mississippian is typically characterized by the construction of truncated temple mounds, reliance on cultivated crops, the development of a social elite, and complicated stamped pottery. The best information for the coastal area comes from the only incompletely reported excavations at the Charles Town Landing site (South 1971). In addition, Anderson (1989) provides an excellent synthesis of Mississippian research in South Carolina, observing that "while we have a fair appreciation for the culmination of the Mississippian in South Carolina, its origins and immediate Woodland antecedents remains largely unknown at the present" (Anderson 1989:114; see also Anderson 1994).

Anderson also notes the need for additional research in the area of:

> relationships between Woodland and Mississippian occupations in South Carolina, particularly the mechanisms bringing about the transition between the seemingly markedly dissimilar forms of social organization and subsistence adaptation (Anderson 1989:113).

While Trinkley (1981a, 1983a, 1983b) has offered a cultural sequence for the Mississippian remains in the coastal area that encompasses the Jeremy, "classic" Pee Dee, "post-classic" Pee Dee, Wachesaw, and Kimbel series, Anderson et al. (1982:312-319) offers an alternative perspective incorporating Pee Dee and Ashley wares.

Protohistoric

The history of the numerous small coastal Indian tribes is poorly known. As Mooney noted, the coastal tribes:

> were of but small importance politically; no sustained mission work was ever attempted among them, and there were but few literary men to take an interest in them. War, pestilence, whiskey and systematic slave hunts had nearly exterminated the aboriginal occupants of the Carolinas before any body had thought them of sufficient importance to ask who they were, how they lived, or what were their beliefs and opinions (Mooney 1894:6).

In truth, our knowledge of these groups has also been limited because too few scholars have taken an active interest in the primary sources and there has been too little desire to evaluate critically the early research by Mooney (1894) and Swanton (1952). For South Carolina Anderson (1989:117-118) briefly notes the current status of ethnohistoric research.

Historic Overview

Aboriginal groups and culture persisted in the low country into the eighteenth century, although their population declined from at least 1750 individuals in A.D. 1562 to about 660 in A.D. 1682 (Waddell 1980:8-13). It is therefore difficult to separate discussions of Native Americans from the period of early Spanish, English, and French exploration and settlement (A.D. 1521-1670).

The conflict between the various powers (particularly the English and Spanish) resulted in the Indian populations being alternately wooed and then attacked with the ultimate result being cultural disintegration and fragmentation. While the Guale were present on the South Carolina coast into the middle seventeenth century, they were probably destroyed by the early eighteenth century. Both Jones (1978) and Waddell (1980) provide information on nearby Indian towns. Covington (1968:10) discusses the presence of Indian villages in 1685 on Hilton Head Island, where they were seeking the protection of the nearby Scottish colony of Stuarts Town at Port Royal from the Spanish. In 1696 Dickinson (Andrews and Andrews 1981:74-75) reported the presence of palmetto "wigwams" perhaps on the southern tip of Hilton Head Island. Apparently Yemassee groups were found in the Beaufort area until the 1715 Yemassee War (Covington 1968:12).

The Spanish Period

The first Spanish explorations in the Carolina low country were conducted in the 1520s under the direction of Lucas Vasquez de Ayllon. Quattlebaum notes that,

> Ayllon's captain, Gordillo, spent many months exploring the Atlantic coast . . . . Unfortunately we have little record of the extent of this expedition (Quattlebaum 1956:7).

One of the few areas explored by Gordillo which can be identified with any certainty is Santa Elena (St. Helena). Apparently Port Royal Sound was entered and land fall made at Santa Elena on Santa Elena's Day, August 18, 1520. "Cape Santa Elena," according to Quattlebaum (1956:8) was probably Hilton Head (Hoffman 1984:423).

Gordillo's accounts spurred Ayllon to seek a royal commission both to explore further the land and to establish a settlement in the land called Chicora (Quattlebaum 1956:12-17). In July 1526 Ayllon set sail for Chicora with a fleet of six vessels and has been thought to have established the settlement of San Miguel del Galdape in the vicinity of Winyah Bay (Quattlebaum 1956:23). Hoffman (1984:425) has more recently suggested that the settlement was at the mouth of the Santee River (Ayllon's Jordan River). Ferguson (n.d.:1) has suggested that San Miguel was established at Santa Elena in the Port Royal area. Regardless, the colony was abandoned in the winter of 1526 with the survivors reaching Hispaniola in 1527 (Quattlebaum 1956:27).

The French, in response to increasing Spanish activity in the New World, undertook a settlement in the land of Chicora in 1562. Charlesfort was established in May 1562 under the direction of Jean Ribaut. This settlement fared no better than the earlier Spanish fort of San Miguel and was abandoned within the year (Quattlebaum 1956:42-56). Ribaut was convinced that his settlement was on the Jordan River in the vicinity of Ayllon's Chicora (Hoffman 1984:432). Recent historical and archaeological studies suggest that Charlesfort may have been situated on Port Royal Island in the vicinity of the Town of Port Royal (South 1982a). The deserted Charlesfort was burned by the Spanish in 1564 (South 1982a:1-2). A year later France's second attempt to establish their claim in the New World was thwarted by the Spanish destruction of the French Fort Caroline on the St. John's River. The massacre at Fort Caroline ended French colonization attempts on the southeast Atlantic coast.

To protect against any future French intrusion such as Charlesfort, the Spanish proceeded to establish a major outpost in the Beaufort area. The town of Santa Elena was built in 1566, a year after a fort was built in St. Augustine. Three sequential forts were constructed at Santa Elena: Fort San Salvador (1566-1570), Fort San Felipe (1570-1576), and Fort San Marcos (1577-1587). In spite of Indian hostilities and

periodic burning of the town and forts, the Spanish maintained this settlement until 1587 when it was finally abandoned (South 1979, 1982a, 1982b). Spanish influence, however, continued through a chain of missions spreading up the Atlantic coast from St. Augustine into Georgia. That mission activity, however, declined noticeably during the eighteenth century, primarily because of 1702 and 1704 attacks on St. Augustine and outlying missions by South Carolina Governor James Moore (Deagan 1983:25-26, 40).

The British Proprietory Period

British influence in the New World began in the fifteenth century with the Cabot voyages, but the southern coast did not attract serious attention until King Charles II granted Carolina to the Lords Proprietors in 1663. In August 1663 William Hilton sailed from Barbados to explore the Carolina territory, spending a great deal of time in the Port Royal area (Holmgren 1959). Hilton viewed the headland, which now bears his name, noting,

> [t]he lands are laden with large, tall trees, oaks, walnuts, and bayes, except facing the sea it is most pines, tall and good. The land generally, except where the Pines grow, is good soyl covered with black mold . . . . The Indians plant in the worst land because they cannot cut down the timber in the best, and yet have plenty of corn, pompions, water-mellons, musk-mellons (William Hilton 1664; quoted in Holmgren 1959:35).

Almost chosen for the first English colony in South Carolina, Hilton Head Island was passed over by Sir John Yeamans in favor of the more protected Charles Town site on the west bank of the Ashley River in 1670 (Clowse 1971:23-24; Holmgren 1959:39). Like other European powers, the English were lured to the New World for reasons other than the acquisition of land and promotion of agriculture. The Lords Proprietors, who owned the colony until 1719-1720, intended to discover a staple crop whose marketing would provide great wealth through the mercantile system, which was designed to profit the mother country by providing raw materials unavailable in England (Clowse 1971). Charleston was settled by English citizens, including a number from Barbados, and by French Huguenot refugees. Black slaves were brought directly from Africa and by way of the Indies.

The Charleston settlement was moved from the mouth of the Ashley River to the junction of the Ashley and Cooper rivers in 1680, but the colony was a thorough disappointment to the Proprietors. It failed to grow as expected, did not return the anticipated profit, and failed to evidence workable local government (Ferris 1968:124-125). The early economy was based almost exclusively on Indian trade, navel stores, lumber, and cattle. Rice began emerging as a money crop in the late seventeenth century, but did not markedly improve the economic wellbeing of the colony until the eighteenth century (Clowse 1971).

Meanwhile, Scottish Covenanters under Lord Cardross established Stuart's Town on Scot's Island (Port Royal) in 1684, where it existed for four years until destroyed by the Spanish. It was not until 1698 that the area was again occupied by the English. Both John Stuart and Major Robert Daniell took possession of lands on St. Helena and Port Royal islands, and on August 16, 1698, Hilton Head was included as part of a 4800 acre barony granted to John Bayley (Holmgren 1959:42). The town of Beaufort was founded in 1711 although it was not immediately settled. While most of the Beaufort Indian groups were persuaded to move to Polawana Island in 1712, the Yemassee, part of the Creek Confederacy, revolted in 1715. By 1718 the Yemassee were defeated and forced southward to Spanish protection. Consequently, the Beaufort area, known as St. Helena Parish, Granville County, was for the first time safe from both the Spanish and the Indians. On December 10, 1717, Colonel John Barnwell claimed a grant of 500 acres on the northwest corner of Hilton Head (Royal Grants, v.39,p.225). About the same time, Alexander Trench, as agent for John Bayley, son and heir of Landgrave John Bayley, began to dispose of the 48,000 acre inheritance. Holmgren notes that Trench "must have been his own best customer," for he begins to either acquire title or use much of the Bayley property (Holmgren 1959:46-

47). Hilton Head eventually became known as "Trench's Island" in the mid to late eighteenth century.

In 1728 a survey of the Port Royal area was conducted by Captain John Gascoigne and Lieutenant James Cook. Gascoigne's 1729 map ("A True Copy of A Draught of the Harbour of Port Royal") based on this survey identifies "Hilton Head Island," while Francis Swaine, using the same survey, identifies Hilton Head as "Trench Island" on his 1729 "Port Royal" map. By 1777 J.F.W. Des Barres produced a map entitled, "Port Royal in South Carolina," still using the 1728 Gascoigne-Cook survey, which identifies Hilton Head as "Trench's Island" (Cumming 1974).

The British Colonial Period

Although peace marked the Carolina colony, the Proprietors continued to have disputes with the populace, primarily over the colony's economic stagnation and deterioration. In 1727 the colony's government virtually broke down when the Council and the Commons were unable to agree on legislation to provide more bills of credit (Clowse 1971:238). This, coupled with the disastrous depression of 1728, brought the colony to the brink of mob violence. Clowse notes that the "initial step toward aiding South Carolina came when the proprietors were eliminated" in 1729 (Clowse 1971:241).

While South Carolina's economic woes were far from solved by this transfer, the Crown's Board of Trade began taking steps to alleviate many of the problems. A new naval store law was passed in 1729 with possible advantages accruing to South Carolina. In 1730 the Parliament opened Carolina rice trade with markets in Spain and Portugal. The Board of Trade also dealt with the problem of the colony's financial solvency (Clowse 1971:245-247). Clowse notes that these changes, coupled with new land policies, "allowed the colony to go into an era of unprecedented expansion" (Clowse 1971:249). South Carolina's position was buttressed by the settlement of Georgia in 1733.

By 1730 the colony's population had risen to about 30,000 individuals, 20,000 of whom were black slaves (Clowse 1971:Table 1). The majority of these slaves were used in South Carolina's expanding rice industry. In the 1730 harvest year 48,155 barrels of rice were reported, up 15,771 barrels or 68% from the previous year (Clowse 1971:Table 3). Although rice was grown in the Beaufort area it did not become a major crop until after the Revolutionary War and it was never a significant crop on Hilton Head (Hilliard 1975). Elsewhere, however, rice monoculture shaped the social, political, and economic systems which produced and perpetuated the coastal plantation system prior to the rise of cotton culture.

Although indigo was known in the Carolina colony as early as 1669 and was being planted the following year, it was not until the 1740s that it became a major cash crop (Honeycutt 1949). While indigo was difficult to process, its success was partially due to it being complementary to rice. Honeycutt notes that planters were "able to 'dovetail' the work season of the two crops so that a single gang of slaves could cultivate both staples" (Honeycutt 1949:18). Indigo continued to be the main cash crop of South Carolina until the Revolutionary War fatally disrupted the industry.

A decade prior to the Revolutionary War, James Cook produced "A Draught of Port Royal Harbour in South Carolina" (1766) which identified 25 families on Hilton Head Island. This is significant in understanding the Colonial ownership of the island, since most property records were destroyed either in 1864 (by the Civil War) or in 1883 (by a fire).

Scholars have estimated that at the end of the colonial period, over half of eastern South Carolina's white population held slaves, although few held a very large number. Hilliard (1984:36-37) indicates that more than 60% of the Charleston slaveholders by 1860 owned fewer than 10 slaves, while the average number of slaves per slaveholding was less than five. In Beaufort, however, the average number of slaves per slaveholding was greater than 20 and slaves accounted for over 70% of the Beaufort population by 1860 (Hilliard 1984:34).

The Revolutionary War brought considerable economic hardship to the planters. During the war the British occupied Charleston for over two and one-half years (1780-1782) and a post was established in

Beaufort to coordinate forays into the inland waterways (Federal Writer's Project 1938:7). Holmgren (1959:55-59) notes only that skirmishes took place on Hilton Head between the island's Whigs and Tories from neighboring Daufuskie Island. During one skirmish, the Talbird house, on Skull Creek, was burned. The removal of the royal bounties on rice, indigo, and naval stores caused considerable economic chaos with the eventual "restructuring of the state's agricultural and commercial base" (Brockington et al. 1985:34).

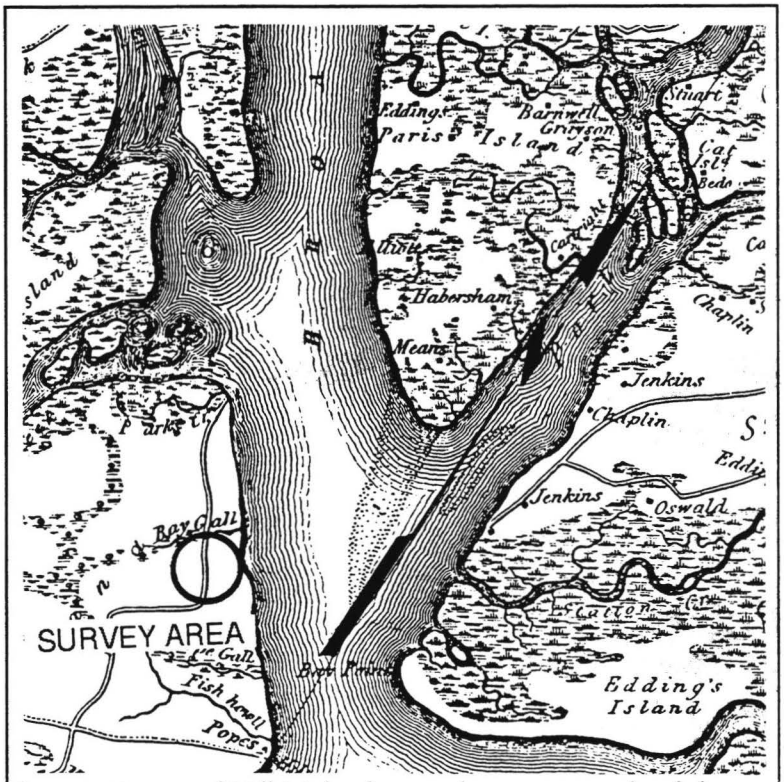

Figure 8. Portion of Mills' *Atlas* showing the project area, but failing to provide any detail concerning Fish Hall Plantation.

The Antebellum Period

While freed of Britain and her mercantilism, the new United States found its economy thoroughly disrupted. There was no longer a bounty on indigo, and in fact Britain encouraged competition from the British and French West Indies and India "to embarrass her former colonies" (Honeycutt 1949:44). As a consequence the economy shifted to tidewater rice production and cotton agriculture. Lepionka notes that "long staple cotton of the Sea Islands was of far higher value than the common variety (60 cents a pound compared to 15 cents a pound in the late 1830s) and this became the major cash crop of the coastal islands" (Lepionka et al. 1983:20). It was cotton, in the Beaufort area, that brought a full establishment of the plantation economy. Lepionka concisely states,

> [t]he cities of Charleston and Savannah and numerous smaller towns such as Beaufort and Georgetown were supported in their considerable splendor on this wealth . . . . An aristocratic planter class was created, but was based on the essential labor of black slavery without which the plantation economy could not function. Consequently, the demographic pattern of a black majority first established in colonial times was reinforced (Lepionka et al. 1983:21).

Mills, in 1826, provides a thorough commentary on the Beaufort District noting that,

> Beaufort is admirably situated for commerce, possessing one of the finest ports and spacious harbors in the world . . . . There is no district in the state, either better watered, of more extended navigation, or possessing a larger portion of rich land, than Beaufort: more than one half of the territory is rich swamp land, capable of being improved so as to yield abundantly (Mills 1826:367).

Describing the Beaufort islands, Mills comments that they were "beautiful to the eye, rich in

production, and withal salubrious" (Mills 1826:372). Land prices ranged from $60 an acre for the best, $30 for "second quality," and as low as 25 cents for the "inferior" lands. Grain and sugarcane were cultivated in small quantities for home use while,

> [t]he principal attention of the planter is . . . devoted to the cultivation of cotton and rice, especially the former. The sea islands, or salt water lands, yield cotton of the finest staple, which commands the highest price in market; it has been no uncommon circumstance for such cotton to bring $1 a pound. In favorable seasons, or particular spots, nearly 300 weight has been raised from an acre, and an active field hand can cultivate upwards of four acres, exclusive of one acre and half of corn and ground provisions (Mills 1826:368).

The emphasis of Beaufort District's agriculture can be easily observed by reference to Hilliard (1984). During the antebellum period Beaufort's wheat production remained below one bushel per capita and less than 15 bushels per square mile. Corn production fell 20 to 30 bushels per capita in 1840, although corn production remained about 250 bushels per square mile for most of the district throughout the period. Less than 10,000 pounds of tobacco were grown in the District in 1860 and less than 100 hogsheads of sugar cane were produced. Sweet potatoes were the largest non-cash crop grown.

Reference to the 1860 Beaufort agricultural census reveals that of the 891,228 acres of farmland, 274,015 (30.7%) were improved. In contrast, only 28% of the State's total farmland was improved, and only 17% of the neighboring Colleton District's farm land was improved. Even in wealthy Charleston District only 17.8% of the farm land was improved (Kennedy 1864:128-129). The cash value of Beaufort farms was $9,900,652, while the state average by county was only $4,655,083. The value of Beaufort farms was greater than any other district in the state for that year, and only Georgetown listed a greater cash value of farming implements and machinery (reflecting the more specialized equipment needed for rice production in the latter area).

This record of wealth and prosperity is tempered by the realization that it was based on the racial imbalance typical of Southern slavery. In 1820 there were 32,199 people enumerated in Beaufort District, 84.9% of whom were black (Mills 1826:372). While the 1850 population had risen to 38,805, the racial breakdown had changed little, with 84.7% being black (83.2% were slaves). Thus, while the statewide ratio of free white to black slave was 1:1.4, the Beaufort ratio was 1:5.4 (DeBow 1853:338).

The Civil War and Postbellum

Hilton Head Island fell to Union forces on November 7, 1861 and was occupied by the Expeditionary Corps under the direction of General T.W. Sherman. Beaufort, deserted by the Confederate troops and the white towns people, was occupied by the Union forces several weeks later. Hilton Head became the Headquarters for the Department of the South and served as the staging area for a variety of military campaigns. As a result, the island is rich in military sites dating from 1861 through 1867, when the Department of the South was transferred to Charleston. A brief sketch of this period, generally accurate, is offered by Holmgren (1959), while a similarly popular account is provided by Carse (1981). As a result of the Island's early fall to Union forces, all of the plantations fell to military occupation, a large number of blacks flocked to the island, and a "Department of Experiments" was born. An excellent account of the "Port Royal Experiment" is provided by Rose (1964), while the land policies on St. Helena are explored by McGuire (1985). Trinkley (1986) has examined the freedmen village of Mitchelville on Hilton Head Island. One result of the Mitchelville work was to document how little is actually known about the black heritage on Hilton Head and the sea island's postbellum history. Even the social research spearheaded by the University of North Carolina's Institute for Research in Social Science at Chapel Hill in the early twentieth century (e.g. Johnson 1969) failed to record much of the activities on Hilton Head.

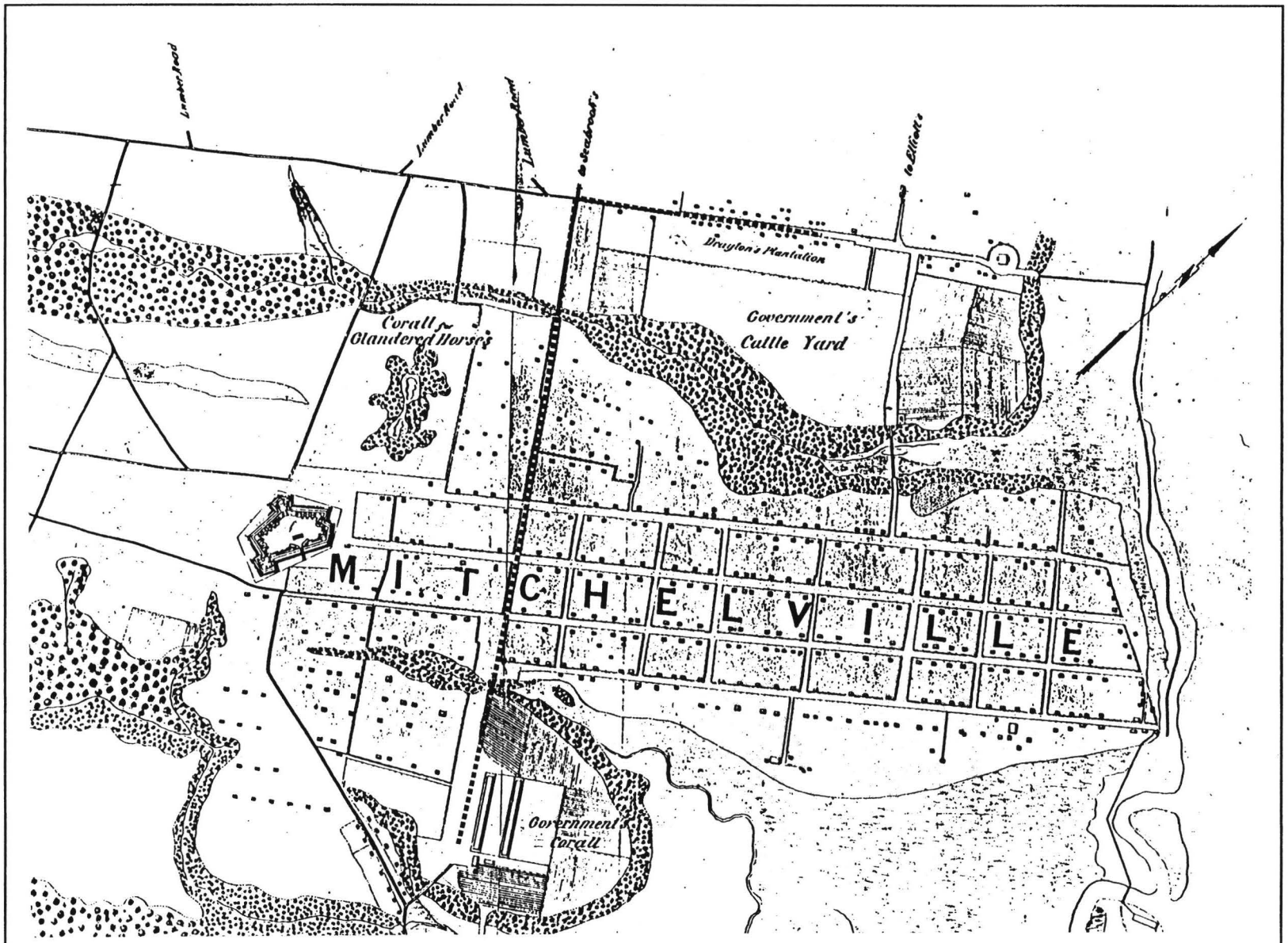

Figure 9. A portion of the ca. 1865 map of Hilton Head, showing the large Mitchelville "development," as well as the Drayton slave row to the north. The dashed line shows the survey corridor.

Rose clearly reveals the failures of the "Port Royal Experiment," noting that Northerners felt that "in granting the franchise the national obligation to the freedmen had been fulfilled" (Rose 1964:389). Money and Northern support for the freedmen quickly dried up after the war, leaving most blacks with little beyond their small plots of land (obtained from the previous slave plantations) which they carefully guarded, for "they well understood the basis of their security" (Rose 1964:396). The black yeomanry, however, was largely disfranchised by the 1895 South Carolina constitutional convention. Rose notes that Sea Island blacks became, as a result, increasingly self-governing with the Baptist church being the greatest force in their lives. While the "secular law was the 'unjust' law, the church law was the 'just' law" (Rose 1964:407). This sense of community, churches, and order (seen at Mitchelville), may represent one of the strongest aspects of black heritage on the sea islands.

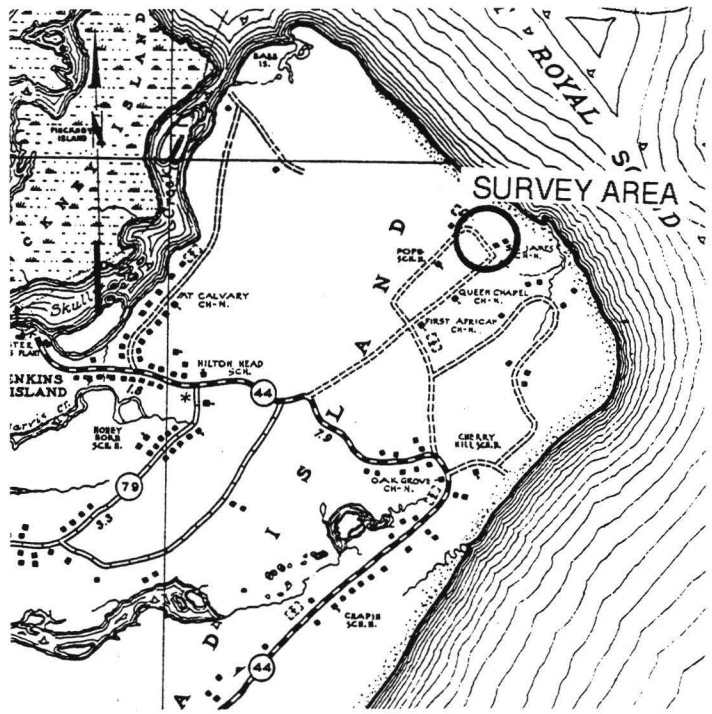

Figure 10. A portion of the 1937 *General Highway and Transportation Map of Beaufort County* showing the survey area on Hilton Head Island.

Secondary sources such as Holmgren (1959) and Peeples (1970) provide antebellum accounts of the island which emphasize the genealogy and land ownership of the period. Holmgren (1959) reproduces a map "compiled by the Hilton Head Company in 1958 from old surveys, maps and other available sources of information" which purports to show Hilton Head "before 1861," while Peeples (1970) provides a similar map titled, "Ante Bellum Hilton Head Island - Reconstructed from Ancient Authorities - 19th C." Both maps are largely correct and indicate that by the Civil War the island's 26 plantations were owned by 15 prominent families — the Baynards, Chaplins, Draytons, Elliots, Ficklings, Gardners, Grahams, Jenkins, Kirks, Lawtons, Mathews, Seabrooks, Scotts, Stoneys, and Stuarts (Holmgren 1959:67). One aspect of the military occupation of the island was the creation of a series of maps (by the War Department, the Coast and Geodetic Survey, and the Tax Commission) which show in varying degrees of accuracy and detail the various late antebellum plantations. This is fortunate since most of the antebellum records for Hilton Head were destroyed. These various maps are discussed in detail by Trinkley (1987:31-34).

By the late 1890s much of the island had been bought by Northerners and Holmgren (1959:118ff) again provides a relatively accurate account. Rather matter-of-factly, she states that,

> Thorne and Loomis [both Northerners] also began buying land from any Negroes willing to sell, and by 1936 there were only 300 Negroes on the island instead of the 3,000 of forty years before (Holmgren 1959:123).

METHODS

Field Methods

The survey corridor was identified as between 12 and 20 feet in width (the 12 foot width reflecting the anticipated right-of-way, while the 20 foot width allowed for some additional construction disturbance). While the SHPO generally does not require shovel testing at intervals greater than 100 feet, we did not feel that this intensity would be adequate considering the presence of both the Drayton Plantation Slave Row and the Fish Haul/Mitchelville sites.

Consequently, the initially proposed field techniques involved the placement of shovel tests at 20-foot intervals along a single transect line along the center of the proposed corridor. All soil would be screened through ¼ inch mesh, with each test numbered sequentially along the transect line. Each test would measure about 1.0 foot square and would normally be taken to a depth of at least 1.5 foot or until subsoil was encountered. In the areas with wetlands, no shovel tests would be excavated. Notes would be maintained for profiles at any sites encountered.

Should sites (defined by the presence of two or more artifacts from either surface survey or shovel tests within a 50 feet area) be identified by shovel testing, notes would be taken on site boundaries, artifact quantity and diversity, site integrity, and temporal affiliation. The information required for completion of South Carolina Institute of Archaeology and Anthropology site forms would be collected and photographs would be taken, if warranted in the opinion of the field investigators.

A single transect line was laid out where the proposed bike path would be constructed, approximately 15 to 20 feet off the road. The bike path would start at Barker Field, on the south side of Baygall Road, and run southwest to the intersection of Baygall and Fish Haul Road. It continues southward on the east side of Fish Haul crossing Beach City Road and continuing an additional 1,400 feet. A total of 220 shovel tests were excavated along the project area. The majority of the shovel tests revealed soils of Wando and Ridgeland fine sands which are typically found in this region. Seabrook and Rosedhu sands were also encountered during the survey, but with less frequency.

The GPS site locations were taken with a Garmin GPS 12XL rover and a Garmin 21 Beacon Receiver. The Garmin 12XL tracks up to twelve satellites, each with a separate channel that is continuously being read. The benefit of parallel channel receivers is their improved sensitivity and ability to obtain and hold a satellite lock in difficult situations, such as in forests or urban environments where signal obstruction is a frequent problem. This was a consideration for the study area.

GPS accuracy is generally affected by a number of sources of potential error, including errors with satellite clocks, multipathing, and selective availability. Satellite clock errors can occur when the satellites's clock is off by a little as a millisecond, or when a slightly-askew orbit results in a distance error. Multipathing occurs when the signal bounces off trees, chain-link fences, or bodies of water. Multipathing was probably not a significant source of error for this study since the site area was fairly clear, being next to the road. The source of most extreme GPS errors is selective availability (SA), the deliberate mistiming of satellite signals by the Department of Defense. This degradation results in horizontal errors of up to 100 m 95% of the time, although the error may be as much as 300 m. Nevertheless, selective availability has been turned off by the DOD. We have previously determined the 3D[1] and DGPS readings with the Garmin 12XL

[1]A basis requirement for GPS position accuracy is having a lock on at least four satellites, which places the receiver in 3D mode. This is critical – as an example, positions calculated with less than four satellites can have horizontal errors in excess of a mile, or over 1,600 m.

were identical. Therefore, we relied on 3D navigation mode, with expected potential horizontal errors of 6 m or less.

Architectural Survey

As previously discussed, we elected to examine only the area immediately adjacent to the project corridor for architectural sites. This was based on the low profile of the proposed project, as well as its existence immediately adjacent to existing roadways. The architectural survey would record buildings, sites, structures, and objects which appeared to have been constructed before 1950 and which retained their integrity.

The survey was conducted by driving the public roads (typically county or state secondary roads) in the APE. As was previously discussed, there were no sites previously recorded in the APE.

Archaeological Site Evaluation

Archaeological sites will be evaluated for further work based on the eligibility criteria for the National Register of Historic Places. Chicora Foundation only provides an opinion of National Register eligibility and the final determination is made by the lead agency, in consultation with the State Historic Preservation Officer at the South Carolina Department of Archives and History.

The criteria for eligibility to the National Register of Historic Places is described by 36CFR60.4, which states:

> the quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and
>
> a. that are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b. that are associated with the lives of persons significant in our past; or
>
> c. that embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d. that have yielded, or may be likely to yield, information important in prehistory or history.

National Register Bulletin 36 (Townsend et al. 1993) provides an evaluative process that contains five steps for forming a clearly defined explicit rationale for either the site's eligibility or lack of eligibility. Briefly, these steps are:

- identification of the site's data sets or categories of archaeological information such as ceramics, lithics, subsistence remains, architectural remains, or sub-surface features;
- identification of the historic context applicable to the site, providing a framework for the evaluative process;
- identification of the important research questions the site might be able to address, given the data sets and the context;
- evaluation of the site's archaeological integrity to ensure that the data sets were sufficiently well preserved to address the research questions; and

- identification of important research questions among all of those which might be asked and answered at the site.

This approach, of course, has been developed for use documenting eligibility of sites being actually nominated to the National Register of Historic Places where the evaluative process must stand alone, with relatively little reference to other documentation and where typically only one site is being considered.

Laboratory Analysis

The cleaning and analysis of artifacts was conducted in Columbia at the Chicora Foundation laboratories. These materials have been catalogued and accessioned for curation at the South Carolina Institute of Archaeology and Anthropology, the closest regional repository. The site form for the identified archaeological sites (38BU1931 and 38BU1932), along with updates for 38BU805 and 38BU806, have been filed with the South Carolina Institute of Archaeology and Anthropology. Field notes have been prepared for curation using archival standards and will be transferred to the South Carolina Institute of Archaeology and Anthropology as soon as the project is complete.

Analysis of the collections followed professionally accepted standards with a level of intensity suitable to the quantity and quality of the remains. In general, the temporal, cultural, and typological classifications of historic remains follow such authors as Price (1970) and South (1977).

RESULTS

Introduction

The intensive shovel testing along the project path identified two previously recorded sites (38BU805) and (38BU806). Site 38BU805 has already been placed on the National Register of Historic Places, while site 38BU806 has been previously found eligible for inclusion on the National Register. For both of these sites our primary goal was to determine if the site boundary extended into the project corridor.

Two new sites, one historical (38BU1931), and one with both historic and prehistoric components (38BU1932), were also identified during the survey (Figure 11). Site 38BU1931 is recommended potentially eligible since we believe it is likely associated with the Mitchelville site (although outside of the previously identified boundaries). Site 38BU1932 is recommended not eligible since the remains are very sparse and are unlikely to be able to make a significant research contribution.

Identified Archaeological Sites

38BU805

As previously discussed, 38BU805, also known as the Fish Haul Site, contains both prehistoric (Stallings Phase) and historic (Freedmen) components. This current survey examined only a very small fringe or strip of the site. The study area was not incorporated into the original Mitchelville study (Trinkley 1986), although it was accepted as the western boundary for the National Register nomination.

One significant goal of this research was to determine if, in fact, archaeological remains would be found in the corridor. The recovery of archaeological remains would validate the National Register boundaries. Based on these findings we felt it would be possible to evaluate the potential for the project to adversely affect the Fish Haul site, and if there would be an adverse affect, we would be in a position to make more educated recommendations concerning data recovery for the portion of the site to be affected. Naturally, we have examined only a narrow ribbon, so our site observations here are in no way intended to replace the far more detailed observations provided in the original study.

The extended site area is located mostly in grassed and lightly wooded areas. A small stream, extending south from Coggins Creek, crosses the corridor, but the topography otherwise stays level at about 10 feet AMSL.

Eight shovel tests were placed at 20 foot intervals along the Dillon Road transect line from the junction of Beach City Road southward. Each shovel test was about 1 square foot in size and went to a maximum depth of 2.0 feet. Wando fine sands were the most common soil type in this site area. The typical A horizon revealed a dark brown (10YR4/3) fine sand (possibly in some areas a plow zone) to 0.8 foot over a brown (10YR5/3) fine sand to 1.6 feet. Closer to the Coggins Creek wetland area, Rosedhu soils were encountered, exhibiting a reduced black (10YR2/1) fine sand up to 1.0 foot over a dark reddish brown (5YR3/2) fine sand to a depth of 1.3 feet.

Table 1.
Artifacts Recovered from Testing at 38BU805

Artifact	ST185	ST186	ST187	ST190	ST192
Whiteware, undec.			1		
Clear glass	2		1		1
Slate (writing)				1	
UID metal		1			
Hammerstone					1

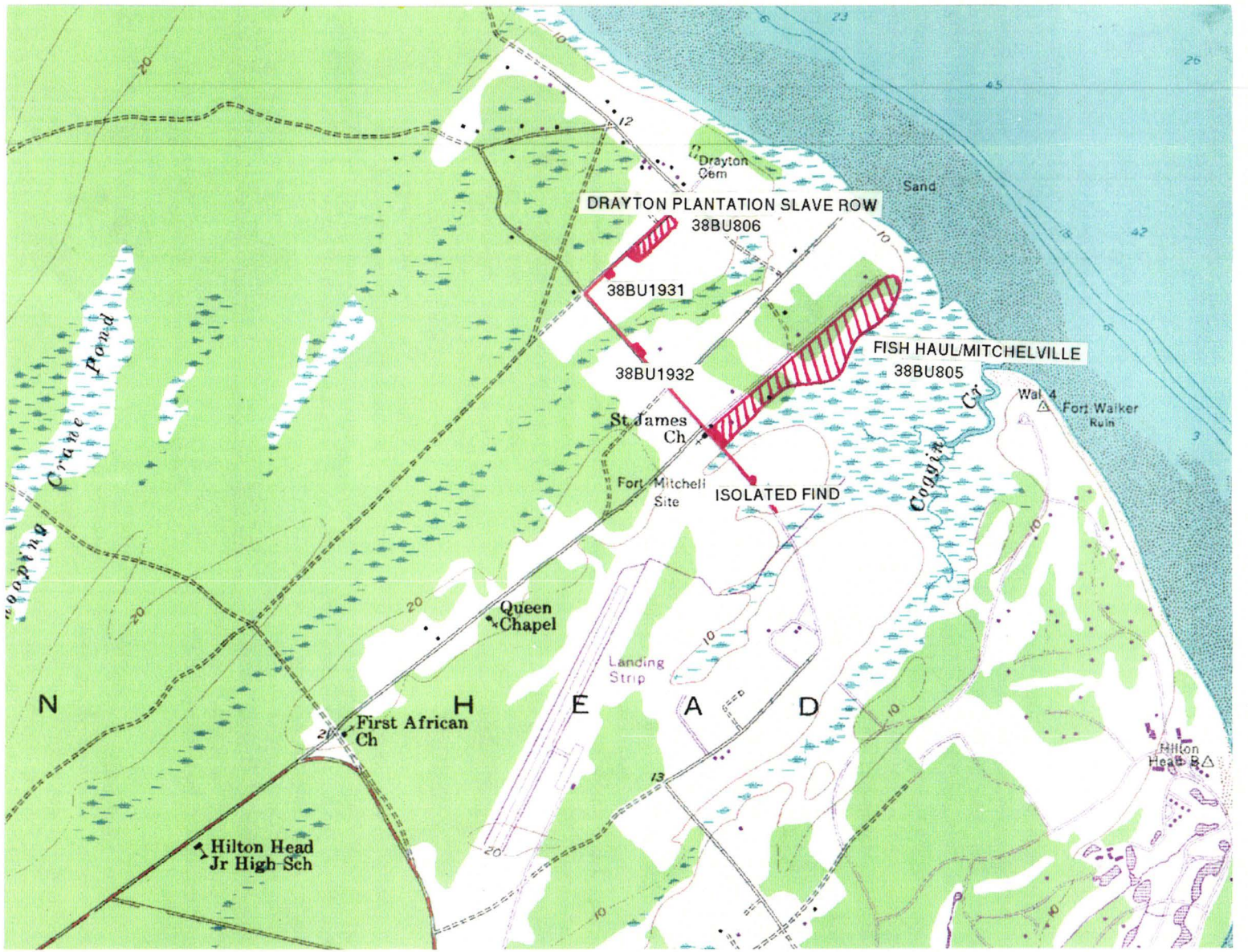

Figure 11. Archaeological sites identified during the pathways survey.

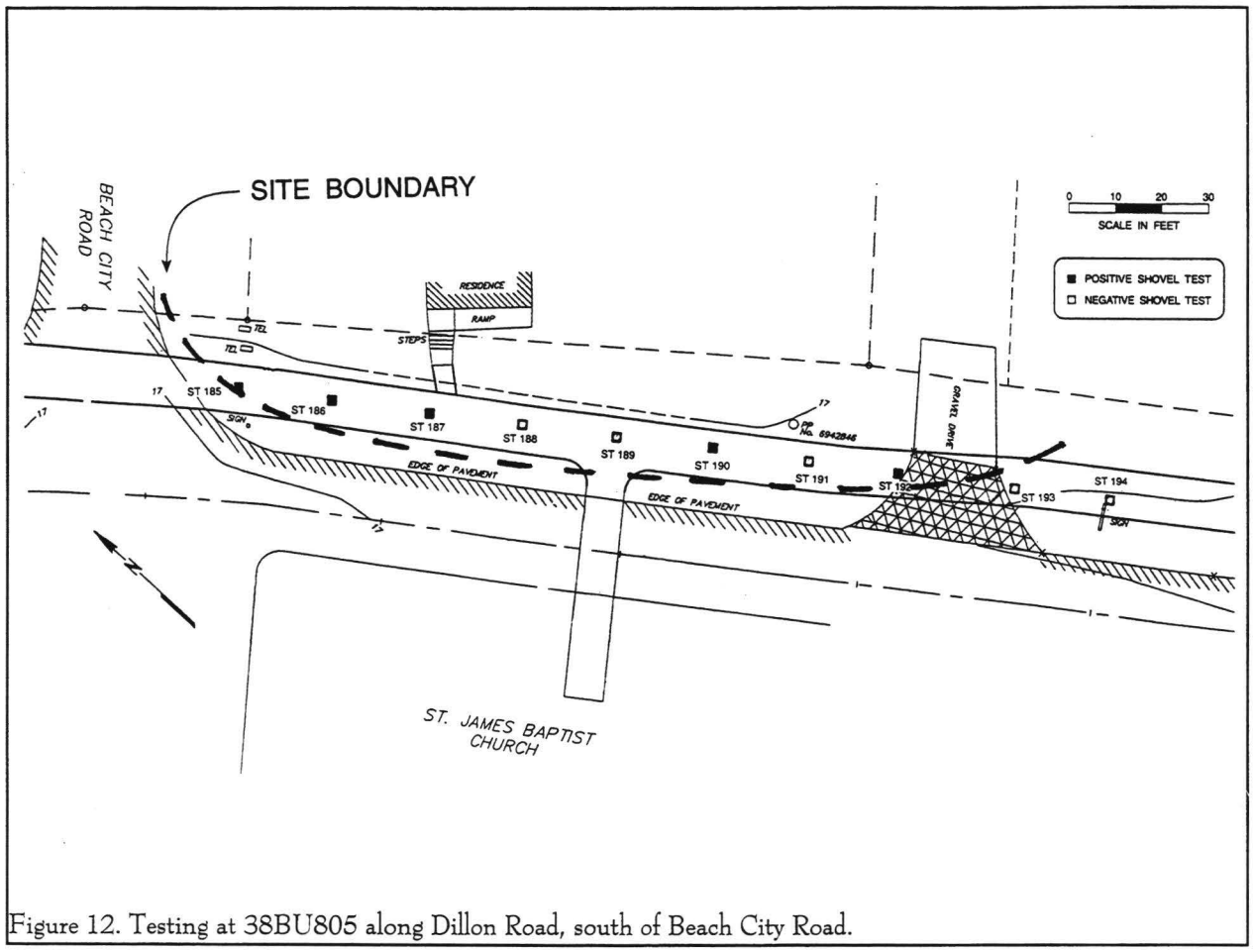

Figure 12. Testing at 38BU805 along Dillon Road, south of Beach City Road.

Five of the eight shovel tests produced artifacts (see Table 1). The artifacts are consistent with a nineteenth century occupation (the clear glass category, for example, does *not* include "modern" roadside trash glass). This assemblage encompasses an area estimated to be 140 feet north-south. A central GPS UTM for the "new" site section (or westward extension of the site) is 529075E and 3566275N.

The site has been previously placed on the National Register and the current findings are consistent with previous findings. Nevertheless, the site is not dense. Reference to the Mitchelville map (Figure 9) shows that there was only one structure in close proximity to the road; most were set to the east. It seems likely, therefore, that the materials encountered during this survey represent yard trash. We found no clear evidence of the one structure seemingly shown adjacent to the road. This structure may have left an indistinct archaeological footprint — or the modern widening of what was originally only a sand wagon road may have destroyed the site.

Regardless, a thin scatter of materials is present in the project area. These materials have the potential to provide some additional information concerning the lifeways and disposal practices of African American freedmen at Mitchelville.

38BU806

38BU806, or the Drayton Plantation slave row, was determined eligible for the National Register in 1989, although this current survey will update the previous investigation and boundary information. The project corridor began at the entrance to Barker Field

Table 2.
Artifacts Recovered from Testing at 38BU806

	Ceramics			Glass					UID		
ST	WW	Porc.	Colono	Blk	Aqua	Brn	Clear	Nail	Metal	Slate	Other
1								1			
4				1				1			
5	3		1					2	4		
6									7		
7					1			2			
9		1			1		1		2		
10					1			1			
11											1*
12								1			
13					2			1			
14								1	1		
15	1						2	1			1**
16	1							1			
17				1							
18	1				1						1***
20				1							
21	3										
22								1			
23						1					
24								1			
25				3	1				3		
28										1	
29	1				1						
34								1			
35					1						
39				1				1			

WW = whiteware; Porc.= white porcelain
* - glass toy marble
** - brass eye
*** - bone

and extended west, on the south side of Bay Gall Road. Much of the site area is included in the Barker Field recreation facility, although the western quarter extends into a dense wooded tract separating the athletic fields from adjacent residences.

Barker Field, which is maintained by Beaufort County, has previously erected chain link fences around the various tabby chimney ruins. While this was presumably done to prevent vandalism and damage, as well as to limit the County's liability for injury, the fences are in poor condition and the gate to the tabby ruins was open at the time of this survey.

A series of 39 shovel tests were excavated between the beginning of the project (identified as Station 15+00) and approximately Station 9+00. This included both the area of the recreation field, the

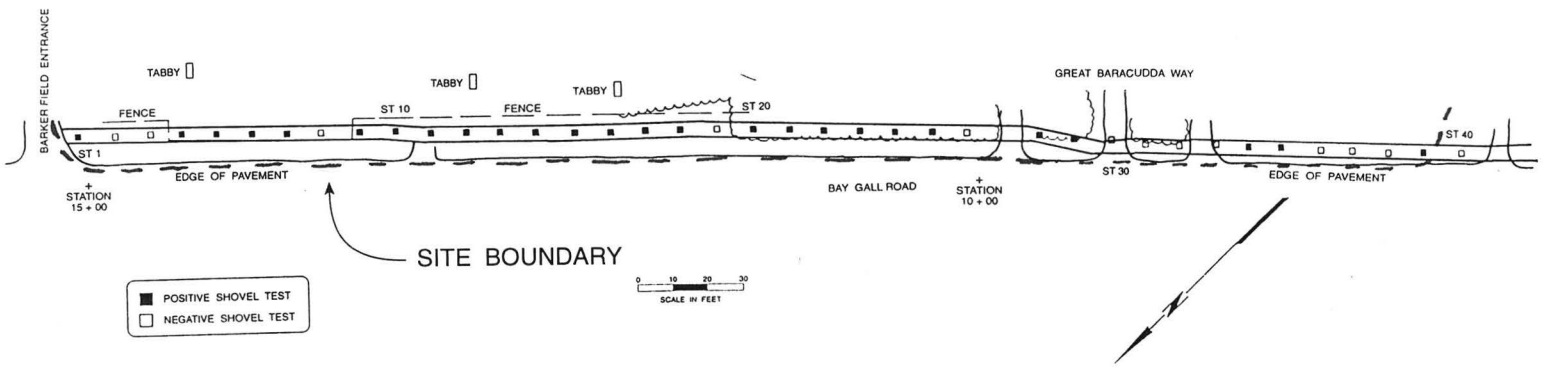

Figure 13. Sketch map of shovel testing on the northern boundary of 38BU806.

Table 3.
GPS Locations (NAD27 Datum) for the Tabby Chimneys at 38BU806

Chimney	Easting	Northing
1 (W end)	528908	3567109
2	528891	3567098
3	528879	3567071
4	528860	3567060
5	528842	3567041
6 (E end)	528820	3567027

adjacent the structures in historic photographs).

Shovel tests were approximately 1 square foot in size and reached a depth of 2.0 feet. The y revealed primarily Ridgeland soils which exhibit a very dark gray (10YR3/1) fine sand to 0.7 foot over a dark reddish brown (5YR3/2) fine sand. The A2 layer which extended to depths of at least 2.0 feet consists of a very pale brown (10YR7/4) fine sand.

The level topography, which stays at 10 feet AMSL was likely an encouragement to the use of this adjacent woods, and the front yards of several property owners. Some of these areas were lightly wooded, while others were grassed.

Figure 14. View of the western end of the Drayton slave row, at Barker Field, looking west.

Twenty-nine of the 39 shovel tests were positive, yielding a relatively broad range of artifacts characteristic of a slave settlement (Table 2).A total of 69 artifacts were recovered, primarily representing Kitchen (ceramics and container glass) and Architecture (nails) Group artifacts. The dominant ceramic is nineteenth century whiteware, consistent with the earlier investigation, although one fragment of Colono ware was also recovered. This low fired earthenware is generally attributed to African American slaves, although it is very uncommon on Hilton Head Island. Also recovered are a small number of other items — a brass eye, representing the Clothing Group; a fragment of a glass marble, considered a toy and included in the Activities Group; and a fragment of a probable writing slate, representing a Personal Group artifact. Not included in the tabulations are brick and shell, both of which were ubiquitous in this immediate area and are associated with the slave structures (shell is shown piled up

area as a settlement. These investigations have extended the site boundaries west, past the last still extant tabby chimney, through the wooded area and into yard areas. We estimate that the site extends approximately 780 feet along Bay Gall. A central GPS UTM coordinate is approximately 528821E and 3567027N which was taken at the sixth tabby chimney belonging to the slave row (the GPS points for the other chimneys are provided in Table 3).

A broad range of the data sets anticipated to be associated with 38BU806 have, in fact, been recovered in this testing. In addition, the western boundary has

been extended off the Beaufort County property, revealing that although the tabby chimneys are no longer standing, it is probable that below ground remains of this slave settlement are preserved. It is likely that the site can address a broad range of questions dealing with the lifeways of Drayton's slaves — which originally justified the eligibility determination in 1989. Given the continued development of Hilton Head, 38BU806 represents one of the few (perhaps the only) slave settlement still largely intact on the island.

38BU1931

Site 38BU1931 is a nineteenth century subsurface scatter of domestic artifacts. It is situated on the south side of Bay Gall Road, about 200 feet southwest of the western terminus of 38BU806 and is primarily in the front yard of the residence at 22 Bay Gall Road. The central GPS UTM coordinates (NAD 27 datum) are 528700E 3566932N. The site area has an elevation of about 10 feet AMSL; the adjacent roadway is depressed several feet below the site elevation. The topography in the immediate area is level, with a slight incline to the east.

Surface visibility was good, with only grass atop the soil. Artifacts were identified in two shovel tests. Test 50 yielded one fragment of aqua glass, one whiteware, and one molded porcelain. Shovel Test 51 produced two whitewares. Based on these positive shovel tests, the site boundaries are currently placed about 50 feet east-west, with the site extending south from Bay Gall Road an unknown distance (Figure 15).

Each shovel test within the site area produced soil consistent with Ridgeland fine sands exhibiting an A or Ap layer of very dark gray (10YR3/1) fine sand to 0.7 foot over a dark reddish brown (5YR3/2) fine sand. All of the remains were identified in the upper, or plowzone, region of the test.

Given the proximity to 38BU806, it is possible that this site is associated with the slave settlement, although all of the intervening shovel testing (ST 40 through ST 49) were negative. Reference to Figure 9 reveals that there are several seemingly isolated structures in the site vicinity. It is, however, uncertain whether these are associated with the slave settlement or Mitchelville.

The data sets at 38BU1931are sparse, consisting only of kitchen remains. Nevertheless, their

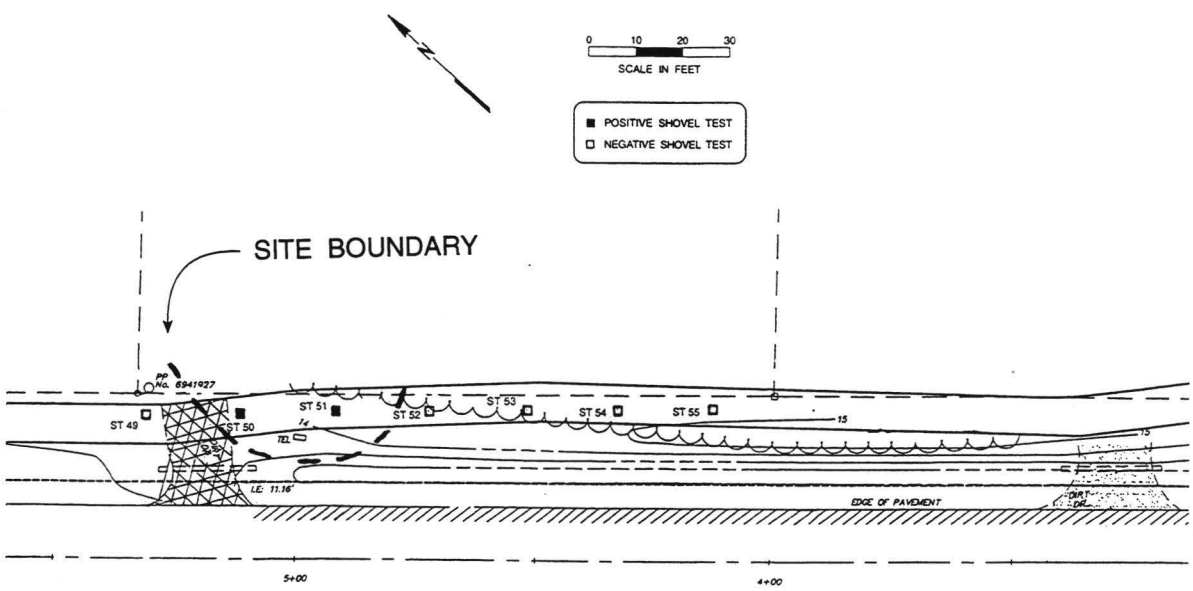

Figure 15. Sketch map of 38BU1931.

integrity is good — there is no evidence of extensive disturbances in the immediate area. As a result, it is possible that this site may contain information that would allow us to better determine its function and association with either the slave settlement or Mitchelville. Two tests, however, not sufficient — even with the very good cartographic evidence — to allow a determination of eligibility. We consequently recommend this site as potentially eligible for inclusion on the National Register.

38BU1932

Site 38BU1932 is located on Fish Haul Road about 300 feet northwest of the intersection of Fish Haul Road and Mitchelville Road. A central UTM coordinate for the site is 528811E and 3566574N.

The site has an elevation of close to 10 feet AMSL and the topography remains fairly level. The soil can be classified as Wando fine sands which have an Ap horizon of dark brown (10YR4/3) fine sand to 0.8 foot over a C1 horizon of brown (10YR5/3) fine sand to 1.6 feet. Since the site area was grassed, surface visibility was good. No surface material, however, was observed.

The site was encountered during routine shovel testing at 20 foot intervals. Five of these tests (ST 117-121) fall into the site area, although only three are positive. Shovel Tests 117 and 118 each produced a single Deptford sherd. In each case the sherd was recovered from the boundary between the Ap and C1 horizons. Shovel Test 121 produced two nail fragments, both recovered from the Ap soil.

The recovery of prehistoric material is consistent with the findings at nearby 38BU805, where the Deptford tended to be slightly higher up in the profiles that the earlier Stallings pottery. The prehistoric scatter appears associated with the high sandy soils in this area, somewhat removed from the low slough to the north. The historic materials are likewise consistent with the nearby Mitchelville settlement. Reference to Figure 9, however, reveals that there were no structures plotted close to the road in this area. Since the only historic materials recovered are two nails, it seems likely that these materials may represent debris scattered by plowing or subsequent activities.

The data sets for 38BU1932 are sparse and it seems unlikely that they are capable of addressing significant research questions regarding either

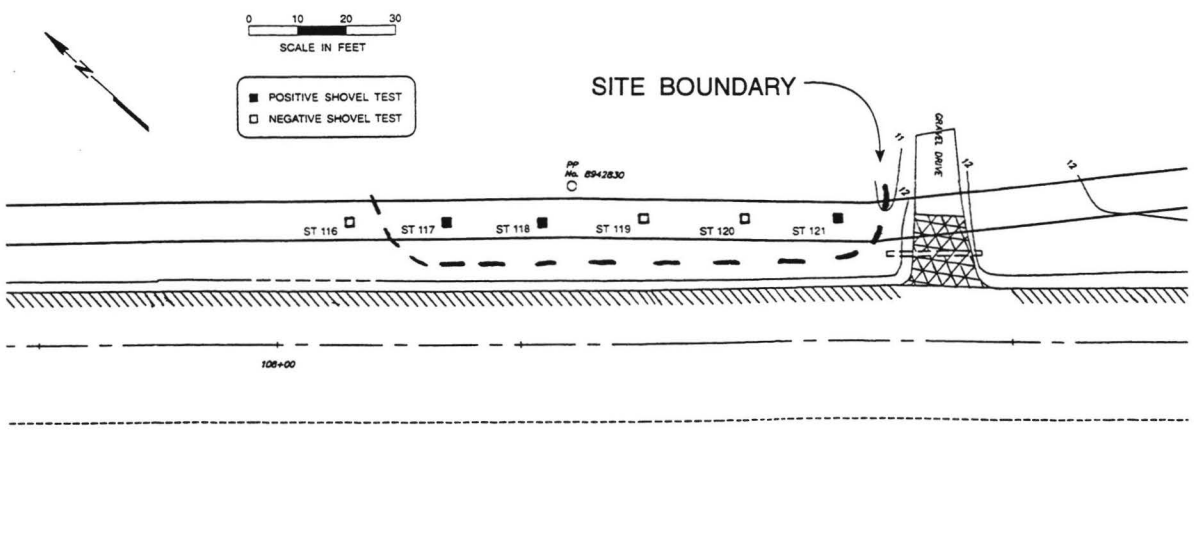

Figure 16. Sketch map of 38BU1932.

Early/Middle Woodland settlement or the expansion of Mitchelville. Consequently, we recommend this site not eligible for inclusion on the National Register of Historic Places. No additional management activities are recommended, pending the review and concurrence of the SHPO.

38BU00

During this survey one isolated find was identified. One fragment of UID Deptford pottery was recovered from Shovel Test 206, about 200 north of Wiley Lane. Additional testing in the area, at 20 foot intervals, failed to reveal any additional remains. This isolated remain is recommended not eligible and no further investigation in this area is recommended.

Historic and Architectural Resources

No structures over 50 years old and exhibiting integrity were identified on or adjacent to the project corridor. One wood frame structure is situated southeast of the intersection of Beach City Road and Dillon Road, but it has been extensively modified and is no longer considered eligible. Likewise, St. James Church represents one of the older churches in the area, but it is on the opposite side of the proposed project and has been modified through time.

In addition, it is unlikely that either site will be affected by the proposed undertaking. Both are in close proximity to the existing highway. The bike path is not projected to increase noise, dust, or other negative features.

SUMMARY AND RECOMMENDATIONS

This study involved the examination of a 0.83 mile corridor situated in north portion of Hilton Head Island, Beaufort County, South Carolina. As previously explained, only a portion of the pathway is included in this study.

The corridor is proposed to be used by the Town of Hilton Head to construct a bike pathway. This report, conducted for the Town, provides the results of that investigation and is intended to examine the archaeological sites found on the proposed tract, as well as any architectural sites which might be immediately adjacent to the pathway, in the area of potential effects (APE). This report is intended to assist the Town of Hilton Head comply with their historic preservation responsibilities.

The proposed work will result in extensive clearing, grubbing, grading, as well as construction activities, not limited to the construction of the pathway itself, but also including various underground utilities. The construction will involve the removal of unsuitable soil, compaction of subsoil, use of crush-run as base material, and paving. Once the asphalt is laid, signs and fencing will be erected which may visually detract from its surroundings. The miniature road is likely to destroy any archaeological sites which may be present on the survey tract. The work may also modify the visual surroundings of any historic properties in the APE.

There are small neighborhoods in the areas surrounding the project area with several residence's yards directly in the path of the bike route. The survey tract passes through primarily grassy and lightly wooded areas, although it does pass over two significant wetland areas, where fill will be used. Shovel tests were conducted at 20 foot intervals on a single transect line in the approximate center of the pathway

As a result of this investigation, two previously recorded sites were revisited and two new sites were identified.

38BU805

Site **38BU805**, also known as the Fish Haul Site or Mitchelville, represents both a dense Late Archaic/Early Woodland Stallings occupation, as well as an extensive Freedmen's village. The site has been placed on the National Register of Historic Places. This survey revealed that there are, in fact, remains associated with Mitchelville in the bike pathway. It is our opinion that construction of the pathway has the potential to destroy a portion of the National Register site which could provide additional significant data.

Reasonable data recovery for the portion of the site proposed to be impacted by the pathway would include the excavation of four 5-foot units in the site area. This would provide controlled recovery of materials which might be present. In addition, we recommend that the pathway be stripped using a tracked backhoe. The bucket should have a cutting bar welded on the teeth to allow a clean surface. This would allow for the examination of any features which might be in the pathway.

38BU806

Site **38BU806**, also known as the Drayton Plantation Slave Row, has been previously determined eligible for inclusion on the National Register by the SHPO. The site represents a nineteenth century slave settlement. It has been abused by Beaufort County, with portions gradually eaten away for a recreation facility. Much of the site has been destroyed without investigation by adjacent development. In spite of this gradual deterioration, it is one of the few such sites (perhaps the only site) left partially intact on Hilton Head. It is also a site for which we have considerable historic documentation since it was very close to both Mitchelville and the Union village of Port Royal. The protection and preservation of this site should receive as high a priority as Mitchelville.

Our testing revealed that the bike path will affect a significant portion of the site, with disturbance to within 16-20 feet of each tabby chimney base — effectively reducing by a third the current "front yard" site area. The pathway area will disturb nearly 11,000 square feet of site area. This represents a significant loss to this site and, we believe, warrants, significant data recovery.

We recommend that 1,100 feet of hand excavation be conducted on the pathway — representing about 10% of the total site loss. These units should be associated with specific structures, in the hope that the recovered remains may be used for intrasite comparisons. Following this work, we recommend that the pathway be stripped using a tracked backhoe. The bucket should have a cutting bar welded on the teeth to allow a clean surface. This will provide an opportunity to examine a very large "front yard" area associated with a significant slave settlement.

In addition, we note that the tabby chimney bases exhibit tremendous deterioration since our 1989 study. Some of this damage is illustrated in Figures 17 and 18. Structure 1 exhibits erosion of the side arms; a third of Structure 2 has collapsed; Structure 2 exhibits a large crack from top to base, with the loss of a portion of the upper back wall; and Structure 4 is approaching failure. Only Structures 5 and 6 — both of which are in the woods and not easily assessable — remain as originally found. For the others, 12 years of "care" by Beaufort County is bringing them very close to total collapse and loss.

This is a classic case of demolition through neglect. In 1989 we recommended (1) that fencing be erected, (2) that intrusive trees be removed under the direction of an archaeologist, and (3) that composite conservation repair be undertaken.

Beaufort County failed to erect any additional fencing and failed to secure the fencing that was present. One tree was removed, without any archaeological supervision, but others have been left to cause additional damage. And absolutely no conservation treatments were undertaken — resulting in the near complete loss of several of these tabby features. Beaufort County has proven itself to be a poor steward of this unique historic site.

Consequently, we recommend in the strongest of terms that these preservation steps should be made an integral part of any data recovery plan for 38BU806. Since Hilton Head will be required to obtain right-of-way from Beaufort County, either the Town can take on this preservation work or it can be made a requirement of the County. Either way, this site has been ignored for too long and any further avoidance of critical preservation work will result in the loss of the physical remains.

We reiterate our previous recommendations. First, the tabby should be secured in a manner that prevents any future vandalism or pedestrian damage. This means repairing the fence, extending it to secure all of the chimney bases, and securing it.

Second, the palmetto tree at Structure 2 must be removed. This should be done by a firm specializing in difficult removals and it may require the erection of a railroad tie crib to protect the tabby during the process.

Third, we recommend that composite repair, probably using some inframing of missing areas, be conducted. Composite repair consists of filling voids with a natural cementitious composite material resembling the original as closely as possible in texture, color, and strength. This type of repair may be used to fill gaps or losses and has been used extensively in stone conservation. Various mixes relying on Portland cement have been used in the past. These have almost universally exhibited cracking and are often harder than the underlying tabby. We recommend the use of Jahn M70. Based on our experiments using this material it has a far greater chance of achieving both a good bond strength and also avoiding drying cracks than any previous mix used. It can also be color matched using stable dyes, rather than lamp black which is notorious for its UV fading.

Following the infill of missing areas, it is important that the tabby receive a stucco coat. While the Jahn M70 may be appropriate for this, we believe that the Jahn M60, an exterior stucco, may be a better

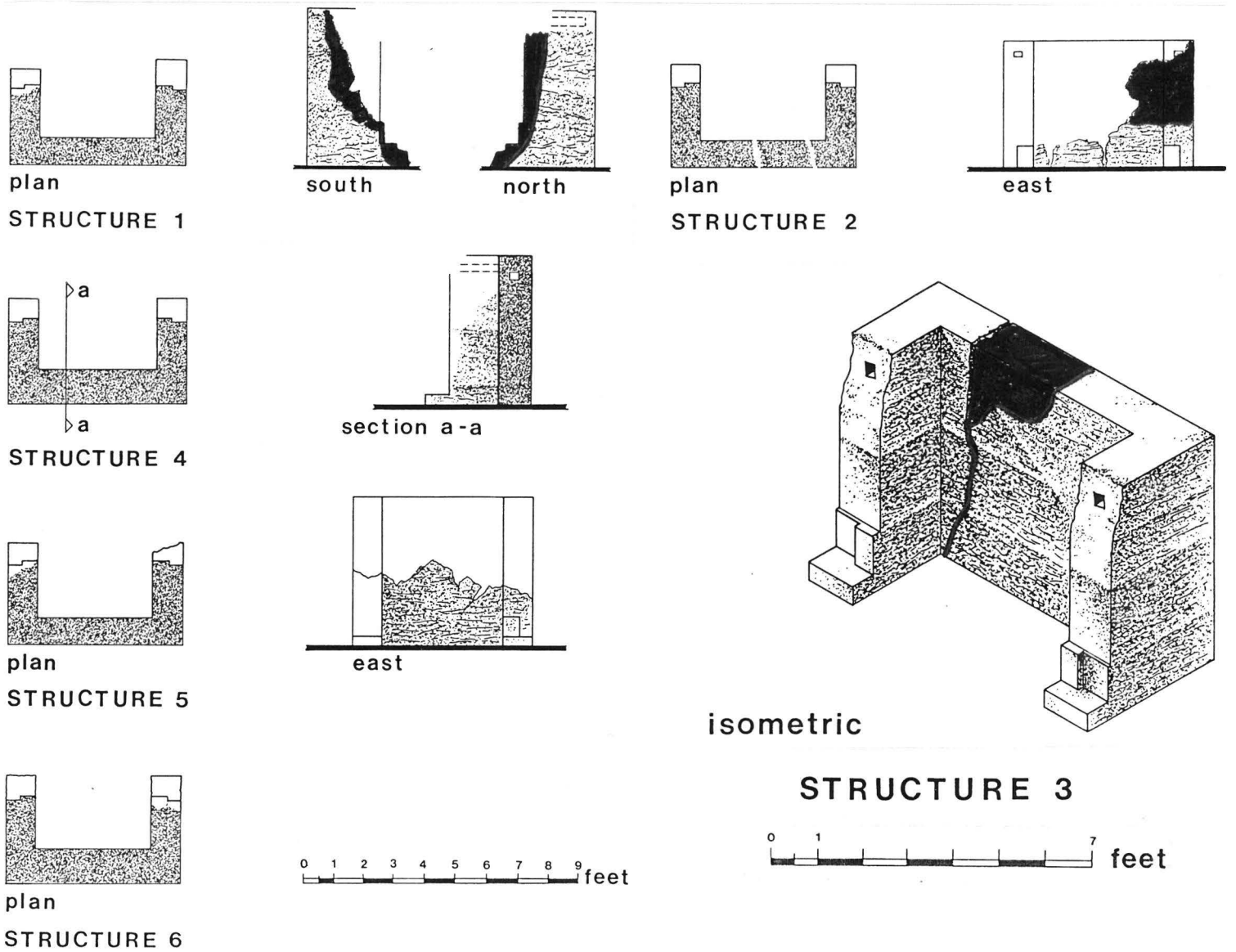

Figure 17. Tabby chimney bases at 38BU806 showing damage and losses since 1989 in black (adapted from Trinkley 1989: Figures 7 and 8).

Figure 18. Structure 4 showing lateral crack and extensive loss in the back wall. The entire upper portion is close to failure.

choice. This coating would help preserve the underlying tabby and would also return the features to something more closely resembling their original appearance.

If there is funding for the creation of a recreational bike pathway, there must be funding for the preservation of one of the only standing, publicly accessible tabby ruins on Hilton Head Island. To allow this site to disappear ignores the responsibility originally assumed in 1989 when Beaufort County acquired federal funding to expand Barker Field.

38BU1931

Site **38BU1931** represents a nineteenth century site. The materials present, primarily ceramics, may link the site to the Drayton Plantation slave settlement (38BU806), although the site may also be associated with the nearby Freedmen's village of Mitchelville (38BU805). Historic mapping reveals several outlying structures in the vicinity of 38BU1931, but it is not possible to determine their function.

The data sets from the site are limited, but integrity is high. Both of the sites with which 38BU1931 may be associated are considered significant and we believe that 38BU1931 may have the potential, with additional investigation, to provide additional important information on either slave lifeways or the lifeways of freed slaves. Additional investigations, however, are necessary to determine if additional data sets are present and to better associate the site with specific research questions. As a result, we recommend the site potentially eligible for inclusion on the National Register.

We recommend that the testing at this site include the excavation of two 5-foot units. This should be adequate to provide a larger sample of materials and allow a complete site assessment. It is also possible that this testing, even if demonstrating that the site is eligible, may be sufficient to be considered adequate site mitigation for the construction activities.

38BU1932

Site **38BU1932** contains both prehistoric and historic components. Data sets are limited to two cut nail fragments — likely associated with the abundant historic remains in the vicinity — as well as two fragments of Middle Woodland Deptford pottery. The relatively close interval testing failed to identify other materials or features. No intact shell midden lens was identified, nor was the prehistoric site found in close association with the swamp edge. It is unlikely that this site can address significant research questions and we have recommended it not eligible. No additional management activities are recommended, pending the review of the SHPO.

Other Resources

It is possible that archaeological remains may be encountered in the area during construction activities. As always, the utility's contractors should be advised to report any discoveries of concentrations of artifacts (such as bottles, ceramics, or projectile points) or brick rubble to the project engineer, who should in turn report the material to the State Historic Preservation Office, or Chicora Foundation (the process of dealing with late discoveries is discussed in 36CFR800.13(b)(3)). No further land altering activities should take place in the vicinity of these discoveries until they have been examined by an archaeologist and, if necessary, have been processed according to 36CFR800.13(b)(3).

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